

October 1994 - Volume 11, No 10

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NDD

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AMIGA

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Review

Pagestream 3.0

First Impressions

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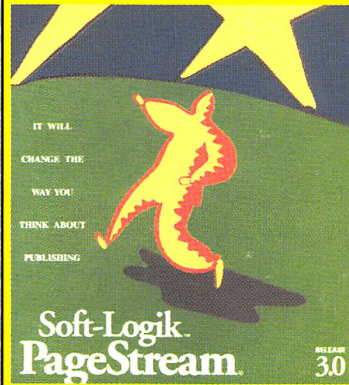
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PageStream 3.0



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CD-ROM

ZAPPO CD-ROM

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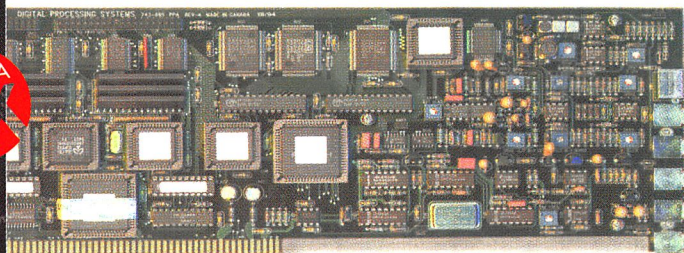
PERSONAL ANIMATION RECORDER

BROADCAST DIGITAL VIDEO PLAYBACK AND RECORDING



With the new PAR it is now possible to playback full PAL resolution video at 25 frames per second. With the addition of the capture card you can also record 25 fps of video to the dedicated PAR hard drive. These revolutionary *AMIGA* cards allow the 3D animator and videographer the power to render frames directly to the PAR hard drive for instant playback. You no longer have to put your animation at the mercy of time-consuming stop-frame recorders. Since your animations are recorded in a component digital format, you can produce

an infinite number of first-generation tape copies. Plus, the PAR features outputs for true component video (Betacam®, MII®), composite and Y/C (Hi8®/S-VHS). The capture card features the same component, composite and Y/C type inputs. You can perform simple edits on your animations or captured video. By transferring frames from the PAR hard drive to an *AMIGA* partition, you can process frames with any Amiga image processing software. i.e. AdPro, OpalPaint, ImageFX, ImageMaster or Adorage. Convert streams of video to other motion formats like MPEG, AVI or CDXL. Perform effects on the video and transfer the files back to the PAR for real-time playback. If you have a SunRize AD516 digital audio card you can lock the recording and playback of audio to SMPTE timecode. Now, your imagination is the limit to what your *AMIGA* can do.



PAR PLAYBACK CARD

Y/C
COMPOSITE
COMPONENT
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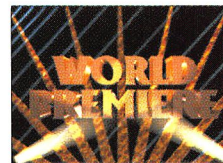
CAPTURE VIDEO, THEN CREATE AND PLAYBACK DVE TYPE FLY-INS.



PLAYBACK SPECIAL EFFECTS.

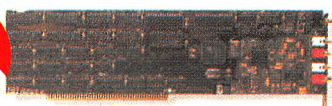


PLAYBACK STUNNING 3D ANIMATION IN 24BIT, 25 FRAMES PER SECOND, REAL-TIME.



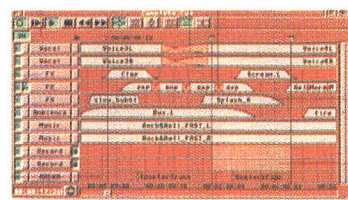
STUDIO 16

8 Track digital non-linear audio editing



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EASY TIME LINE EDITING

or zoom in on specific sounds for fine editing control. Lock the PAR and Studio 16 with SMPTE for full digital video and audio synchronisation. All this at CD sampling rates of 44.1 KHz. True broadcast audio excellence for your *AMIGA* 2000, 3000 or 4000.

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SCALA EX LIBRARY



FILE FORMAT EX PACK: These EX's allow exchanging picture and animation files with platforms like IBM PC® & Macintosh®. Imported files can be converted from and to IFF modes. Formats supported are: BMP, PCX, GIF, TIFF, YUVN, FLI, FLC & Datatypes.

VCR EX PACK: These EX's allow control of RS-232 capable VCR's.

MD100: This card and EX pack allows playback of MPEG video from your *AMIGA* hard-drive or MPEG capable CD-ROM drive. IFF files can be encoded into MPEG via Anim-Lab. VideoCD and CDI supported.

Other EX's include:

SunRize Studio16 * PAR * SCALA Echo * Communicator II

Σ Sigmacom

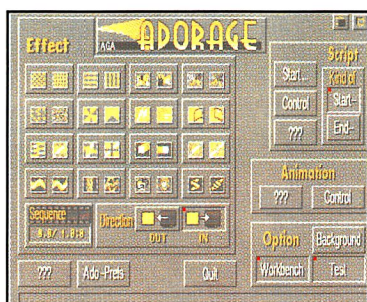
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Features



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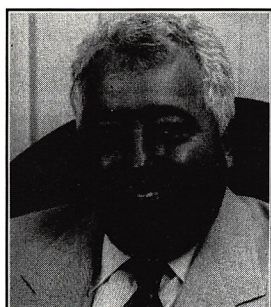
What can you do to improve the quality of your next DTV effort?

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What does Commodore U.K. have in store for the Amiga?

25 Fast animation - no hardware

Software to convert your sluggish ANIM-5 files into something super-smooth.



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Run 24 bit animation at 30 fps!

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At last there's a local spot to register your favourite wares

84 Turn your A1200 into a CD32... almost!

We check out the new Zappo CD

Cover created by Jarrod Pudsey

Image: 1500 x 3000

Program: Lightwave

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Pagestream 3.0

First Impressions
By Andrew Farrell

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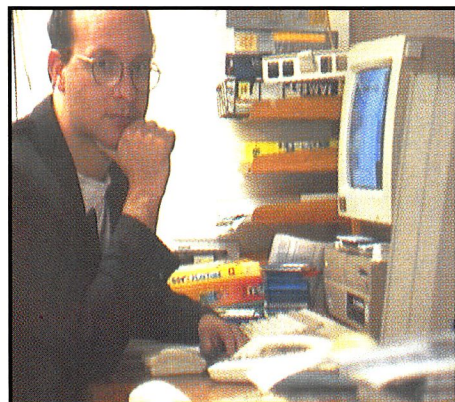
Cheap SCSI

The Oktagon SCSI card
reviewed

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No to AAA, yes to Zappo, ahem Pagestream.



What's happening with Commodore? We get a dozen calls every day asking the same question. The tough part is, our answer hasn't changed much over the past few weeks.

Right now everyone is sitting tight waiting to hear from the liquidators of Commodore International. Their answer is currently holding things up.

Commodore U.K. have made various formal statements and in this issue we present an interesting interview with the man behind the management buyout, David Pleasance. His comments on AAA may sound depressing at first, but they are realistic and I believe a good indicator that there is a clear vision for the Amiga's future.

The exciting bit is, everyone is gearing up for a major burst of activity the moment an announcement of any kind is made.

A lot of companies are currently holding back on new products and plans for expansion - but any day now they could all kick into top gear ready for some speedy growth.

This month sees the arrival of several very significant products. The Zappo CD-ROM drive reviewed on page 84 turns your Amiga 1200 into a CD32 - well, almost! The great thing is it means new life for existing CD-ROM titles, and true multimedia power for the A1200. We can look forward to an increase in the number of CD based application, reference and entertainment programs and a jump in the number of

CD utilities - players, viewers and the like.

CD-ROM is certainly a welcome addition to the Amiga 1200, and now that it's affordable, CD32 development will have something to sustain it until CD32s starting shipping again.

On the application front, Pagestream 3.0 has turned out to be a bit of a nonevent. The software looks great, the manual is excellent and the support is impressive. Unfortunately, the current version has a number of fundamental problems. It's slow, missing important features and there are a number of nasty bugs. But Soft-Logik are working on it very quickly. Version 3.0a arrived within a week of the product shipping, and they're promising more updates soon. Check out our initial impressions on page 28.

Some of you have asked for more articles for beginners. Well, we've heard your cry and next issue we're starting a new beginners section to complement our Help Line and give hand holding to first time Workbench users. Suggestions on articles for beginners and intermediate users are welcome.

To everyone who likes to fax us letters, or modem in the odd article, please note our new fax and data line is (02) 879 4236.

- Andrew Farrell
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Pagestream 3.0 Yes, it's here!	\$CALL

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Call for any titles not listed!

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E & O E

Monster IDE Drive

With the advent of new products like the Personal Animation Recorder, which uses an IDE drive for storage of digital video - not to mention the IDE-equipped A1200 and A4000, and the recent Tandem CD-IDE controller card - Amiga users are more interested in this hard drive standard, and the digital video freaks are particularly interested in huge, fast IDE drives.

If you're one of these people, you'll want to know about Micropolis' new low profile 3.5 inch "green" one gigabyte Taurus 4110A drive. Micropolis claim this drive's 20 per cent faster and 30 per cent cheaper than previous

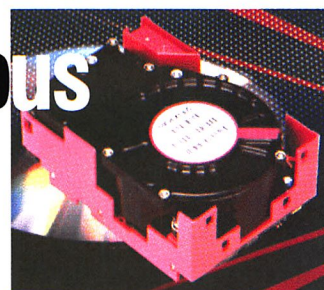
models, while consuming less power. The 4110A spins at 5400rpm, reducing rotational latency (the time taken for the disk to spin round and bring a given piece of data in line with the head) to 5.56 milliseconds. The total average seek time is 8.5ms. It draws only 8.25 watts, and works with Energy Star compliant power saving systems, which is utterly irrelevant to any Amiga applications but might impress your friends.

The estimated street price of the Micropolis Taurus 4110A 1GB drive is \$1500.

For more information, call Merisel on (02) 882 8888.



Humungous SCSI Drive



Also from Micropolis comes the still bigger nine gigabyte 5.25 inch Scorpio Model 1991 AV disk drive. As the name vaguely suggests, the enormous Scorpio's intended for audio-visual applications; it's got a guaranteed transfer rate of 4.3Mb/s and a peak sustained rating of 6.4Mb/s. Audio/video users are further catered for by the drives sophisticated look-ahead caching system, designed to keep the data flow going and avoid glitches in the output sound or vision. People doing audio and video simultaneously from the same

drive are helped by this, since it means the software doesn't have to interlace the audio and the video on the hard disk surface but can lay them down separately - the cache lets the drive play both without continuously jiggling the head back and forth between the two.

If you've got \$7990 to spare, the Scorpio 1991 AV works out at less than 89 cents per megabyte.

Again, call Merisel for more information on (092) 882 8888.

Central Coast Computer Show

Amiga, IBM and Macintosh users on NSW's central coast are invited to the Central Coast Computer Show, held on Sunday the 23rd of October at Erina High School, Entrance Rd, Erina. The show runs from 10AM to 4PM, and entry is free. A raffle will be held at the show, the first prize of which is a CD32 player, with minor prizes every hour.

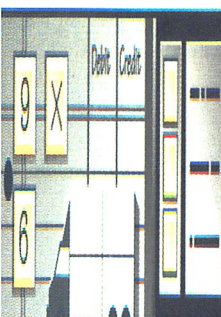
For more information, call (043) 232 179 or (02) 985 9319.

GSoft have moved!

South Australian Amiga hardware and software retailers GSoft have moved. They may now be found at Shop 4, 2 Anderson Walk, Smithfield SA 5114.

Their phone number is now (08) 284 1266, fax (08) 284 0922.

The after hours contact and technical assistance number is still the same - (08) 254 2261.



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Scala News

Scala, the makers of the eponymous presentation software that's put Amigas into all sorts of places that want nifty yet easy to use multimedia displays, is working with General Instrument, the leading producer of equipment for compression and decompression of digital TV signals for cable and satellite transmission.

The aim of the venture is to develop new technologies including an Interactive Program Guide (IPG). The IPG will run in a set-top box far more sophisticated than any around today (Amiga technology?), and will give users multi-featured access to cable and satellite TV systems. General Instrument expects to install several million units in the next three years, all incorporating Scala software.

Scala has also recently em-

ployed Randall Jesup and Dave Haynie, both illustrious ex-Commodore people, and Erik Quackenbush, ex-GVP.

New InfoChannel

In further Scala news, a new version of InfoChannel, IC500, should be out by the time you read this.

IC500 contains new communication features, making maintenance easier and improving security. Other new features include Scala Invoice, drawing tools, absolute timing, file requester shuffler, image manipulation, new wipes and backgrounds, text boxes for subtitling, sound playback from hard disk and support for various file formats.

Contact Technical Directions on (02) 550 6255

Stuff you can drink!

Effortless winner of Weirdest Product Sent For Review This Year is the new cola drink, STUFF. That's right, the name of this drink is STUFF. The logo is rendered in a tasteful green graffiti style against a redbrick background, and the drink's only other claim to fame is it contains guarana extract. Wossat, we hear you ask? Well, guarana is apparently

"the legendary sacred fruit of the Amazon, revered by the Amazon Indians for thousands of years." Uh huh.

We know this because the review beverages came with a press release which said so. Written by some suit trying to sound like a homeboy, the release also told us that STUFF is "streetwise and has an attitude in line with today's teenagers" (is this a

TBC-Enhancer

from Electronic-Design

Shipping as you read this is Electronic-Design's latest product, the TBC-Enhancer. The TBC-Enhancer is an out-board unit, resembling the earlier Neptun genlock, which can serve as a Time Base Corrector and also as a picture colour tone, saturation, contrast, sharpness and luminance corrector. The TBC-Enhancer doesn't need a computer to work, so "traditional" video studios will be interested as well as computer video manipulators.

The TBC-Enhancer can also stabilise "flagwaving"

distortion on the edges of jittering images; it can get rid of flickering colour in degraded copies; and it can remove colour shifts from a signal with the chrominance and luminance out of phase.

While you're waiting for us to get a TBC-Enhancer to review, check out the article on GVP's competing TBC-plus on page 13.

Contact Electronic-Design on +49-89 354 53 03, fax +49-89 354 56 74 for more information.



drink or Heartbreak High we're talking about here?), and is furthermore "about hanging out, doing your own thing". The snappiest part of this release was the phrase "the latest brew with something new - STUFF!"

What's it taste like, then? The general consensus seemed to be that it was "strange, flat and oily", though otherwise like ordi-

nary cola.

If you should wish to try this peculiar product for yourself, it should be available at Sydney corner stores as you read this and subsequently, following its anticipated overwhelming commercial success, nationwide.

Or call STUFF Bottlers' PR company, Capital PR, on (02) 252 3900.

Commodore US Auction Report

► Australian Amigoids had their chance earlier this year, when our local Commodore went toes-up and all its assets were auctioned. Hardware, software, furniture, display stands and umpteen other oddities went under the hammer, but there wasn't much real esoterica.

The Commodore US auc-

tion at West Chester had considerably groovier gear for sale - but it was still well stocked with the usual three M's of auctions; Millionaires, who'll pay more than retail for used stock; Machos, who treat anyone outbidding them as a threat to their masculinity; and Maniacs, who seem to just wave their arms be-

cause they like the feeling. Attendees reported a remarkable turnout for the big selloff, and some remarkably lousy deals.

The furniture went for outrageous prices - hundreds of dollars for a simple one machine cubicle. In contrast, bidding for ephemera like this was pretty subdued at the Australian auction. Test gear was bought by people who seemed to think a Commodore sticker trebled book value - former engineers were killing themselves laughing.

There were huge piles of mainly broken Amiga gear - reminiscent of the Australian auction, which also included bizarre lots like thousands of outmoded cables and crates of A1200 drive mounts.

The needles in these high-tech haystacks were various developer machines - an A3000+, several pilot model build A4000s (with A3400 black faceplates), some A3000Ts, lots of A2000s, and so on.

Unofficial estimates of the amount of money raised are in excess of \$US500,000 - we're still waiting for the official report.



Spottings

• Nathan Johnston of Port Hedland, WA, spotted an A1200 on the ABC show Quantum on the 14th of September, doing graphs related to people drilling holes in gold bars.

• While Meredith and Andre, of Profitlogic in Forest Hill, Qld, were watching "The Making of Wolf", they spotted a brief glimpse of an Amiga keyboard, being used by the special effects people.

• Darren Healey, of Heathridge WA, was walking through the Burswood Casino in WA and passed a touch screen information booth. The only thing the information booth was informing anyone about was that its controlling computer had suffered a "Guru # B54D844D.003F41BE".

• A couple of people have asked if SeaQuest DSV counts as an Amiga spotting, seeing as all the undersea graphics are done on LightWave-equipped Amigas; sorry, but no. And it's a shame that all the scripts seem to be computer generated, too...

AMIGA Networking

AmigaLink two node bundle:

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AmigaLink software will share all drives and a printer with other Amigas. Minimum requirements - KS 1.2, WB 1.3.

Other software available:

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Other hardware available:

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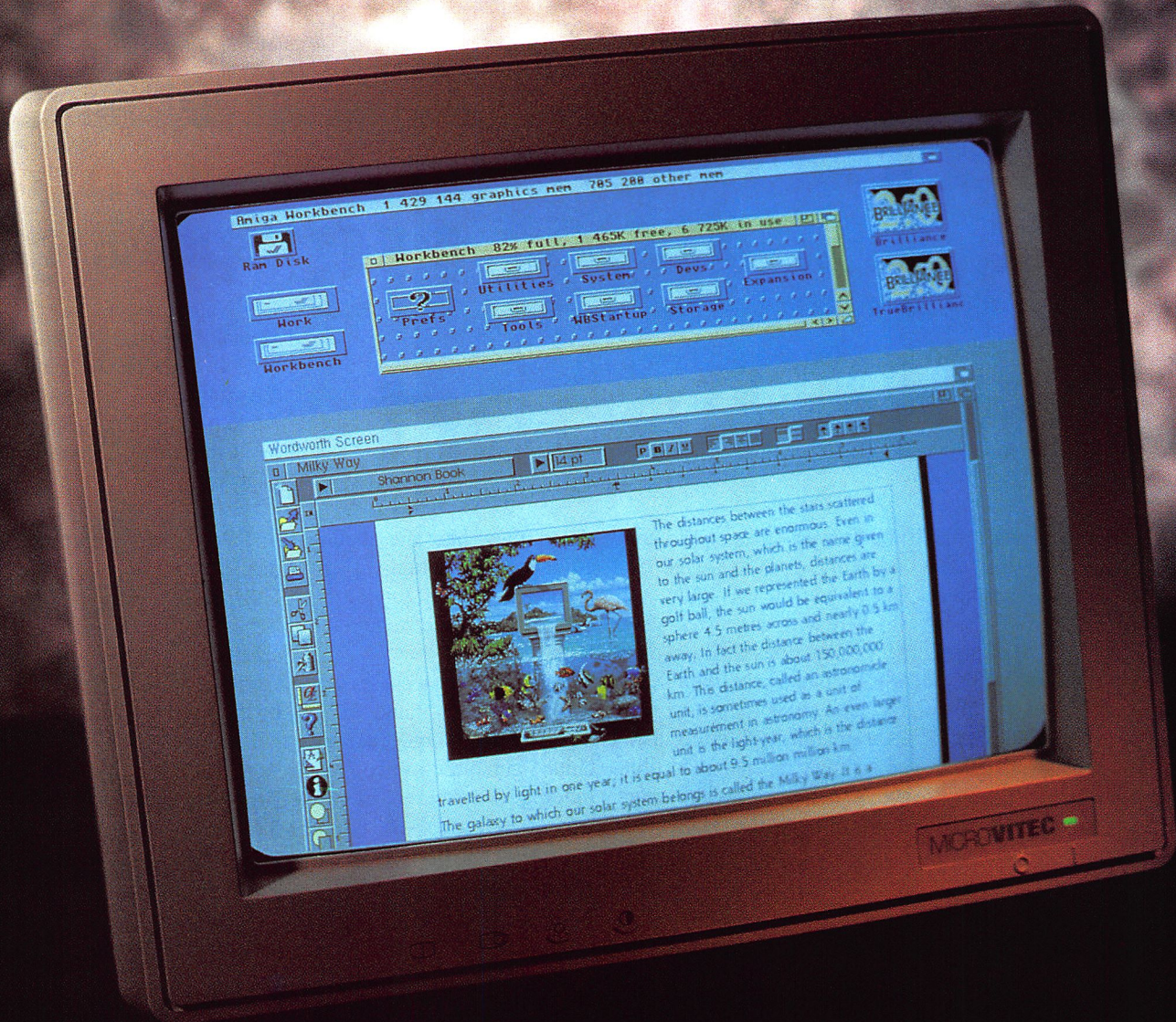
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Cleaning up your desktop video

“How relevant is the TBCplus to the average video enthusiast?”

By Heiko Wymen

► Peter Ward's in depth report in Amiga Review Volume 11 Number 3 said that GVP's Time Base Corrector board for Zorro II/III equipped Amigas really delivers what it promises. Its output is up to the standards expected by professionals in the television and video industry when it is fed an appropriate source signal.

However, although the TBCplus is now retailing for less than \$1400, it obviously is still no give-away and considerably more expensive than a good genlock or frame grabber, the two most popular Amiga video accessories.

This leaves us with an important question: What has the average home videographer and Amiga owner to gain from investing in a TBC on top of, or even instead of, such more affordable and widely accepted items?

Sharper amateur video

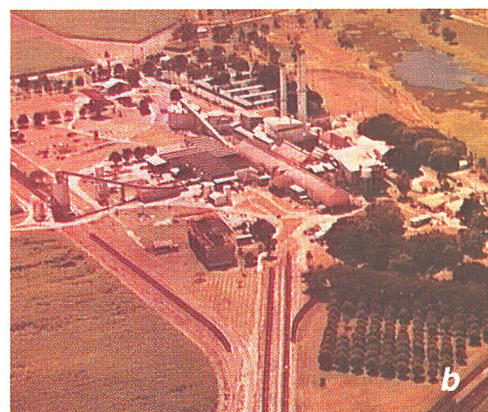
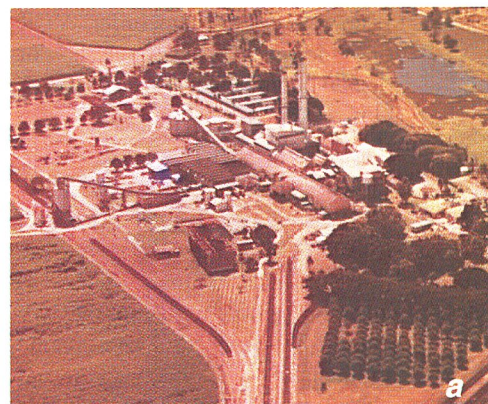
Although amateur video has progressed beyond all expectations since the days of the old tube cameras, nobody would claim it is seriously threatening the performance of triple CCD Betacams at present. Sure, Sony and a few oth-

er manufacturers have released some pretty impressive top of the range consumer models, including multi chip units, but most are clearly outside the average amateur's budget.

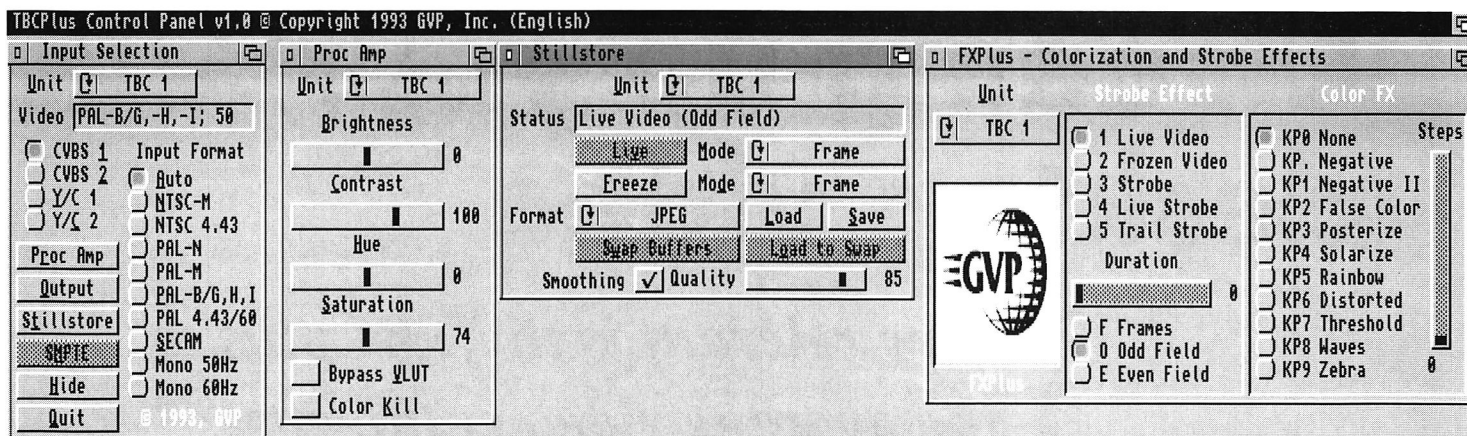
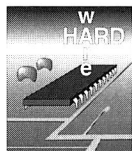
Taking this into account, it may seem there is little sense in getting a broadcast quality TBC when the source material is of inferior quality. In practice, just the opposite is true. The poorer the input signal, the more noticeable the improvement in the output footage will be. Fortunately, most of the enhancements are easy to achieve without any specific knowledge of video technology.

First of all, the rock-steady time base generated by the TBC board eliminates virtually all jitter and thus increases visual sharpness without applying any other adjustments to the video signal. To improve quality even further, the user can perform a large number of sophisticated calibrations. A lot of those are better left untouched by the novice, so GVP decided to group the controls logically on separate panels which remain hidden until intentionally selected.

In everyday use, the average



Although most faults are more noticeable in still video images, the second generation grab (b) confirms that copies made with the TBCplus look very close to the original (a).



Just four control panels are sufficient for general editing

serious amateur will need just four of those panels to improve or manipulate the footage copied from one VTR (camcorder, VCR or video player) to another or displayed on screen.

InputSelection

The Input Selection window allows switching between one Y/C (S-VHS/Hi8) and two composite (VHS/8 mm) sources. There is also the option of using the two composite connectors as separate luminance (CVBS2=Y) and chrominance (CVBS1=C) inputs by employing a mini DIN to 2x BNC adaptor cable. Switching between sources during recording - "hot switching" - is said to be possible, as it takes place during the vertical blanking interval.

In reality the TBCplus only locks to the currently selected input, and so the second signal needs to be synchronised with the first to avoid the monitor losing timing for a moment.

Although not a big issue in home editing, which is usually limited to just one playback and one recording machine, the problem can be overcome by taking advantage of the TBC's keying provision, which can make transitions are perfectly clean.

In single source setups, the input panel would not be needed at all, except in those rare cases where the user wants to transcode PAL, NTSC or SECAM material to PAL or NTSC. This would also require an appropriate configuration of the output settings.

Broadcast quality processing

Probably the most valuable collection of calibration gadgets is found on the ProcAmp panel. It's here that the essential attributes of the video signal, which determine the way a picture appears on screen, can be freely adjusted.

There are sliders for Brightness, Contrast, Hue and Saturation, as well as two tick boxes allowing instant black and white or bypassing the processing amplifier altogether.

The available range of settings varies with each control but should prove sufficient even in a worst case scenario.

Stability and overall quality of the video signal are not compromised at any position of the sliders. In fact, I could not detect any hint of degradation in a test image, with horizontal resolution remaining rock-steady on 400 lines even at the extreme settings.

The Hue control makes it easy to correct white balance mistracking under mixed lighting conditions or when shooting at certain times of the day. This is especially important when the camcorder used lacks a white balance lock.

Copies usually look cleaner and more natural if the saturation is taken back by about 10 to 15 points of the full 150 point range, especially when working with composite video.

Special effects

Not essential, but very handy and effective, the FXPlus window offers numerous colour and strobe effects. Apart from Live (normal) and Frozen (still) video, the latter include the choice of standard Strobe, Live Strobe and Trail Strobe.

Strobe freezes a single frame for a certain time before updating it from the continuing input signal. The interval for which each frame is displayed can be adjusted in steps from 0 to 99. This allows altering the effect from a kind of slow motion to a slide show.

Live Strobe is similar to standard Strobe, with every second still frame replaced by a burst of live video. At shorter duration settings this gives a smoother slow



motion effect than Strobe, while longer cycles look especially pleasant in sync with music.

Trail Strobe can not be adjusted. It keeps one grabbed frame on screen for a short moment, while the action continues in fast strobe mode. The effect reminds me a little of those still photographs where a golfer's swing is frozen in several phases on the same image.

All strobe modes obviously depend on movement in the picture, which means the two fields that make up a full video frame will normally differ considerably.

While this is of no consequence in live video, a frozen frame displays a nasty jitter under those circumstances, which makes the strobe modes look weird or completely destroys the intended effect.

Fortunately, the TBCplus lets its operator choose between full frame video and odd or even field mode. The gain in stability, when selecting one of the field options with either strobe effect, by far outweighs the slight drop in image quality. Field mode may also be the only hope for a viewable still picture grabbed from lively action.

False colour

The right side of the FXplus window is occupied by the colour effects. Two separate negative

modes cater for both masked and unmasked film materials, producing quite acceptable positives from either.

Any colour casts after the conversion are easily eliminated by moving across to the processing amplifier panel and adjusting the Hue control.

Reproductions directly from the negative are often of better quality than those taken from machine prints. Transparencies, on the other hand, can easily be too contrasty for the average video camera's automatic exposure system.

False Colour basically inverts the chroma signal (negative colours) but keeps the luminance part of the image intact. Solarize appears to produce just the opposite - normal chrominance combined with inverted luminance. The luminance level (brightness) is adjustable in this mode, as are all the remaining choices via a common slider.

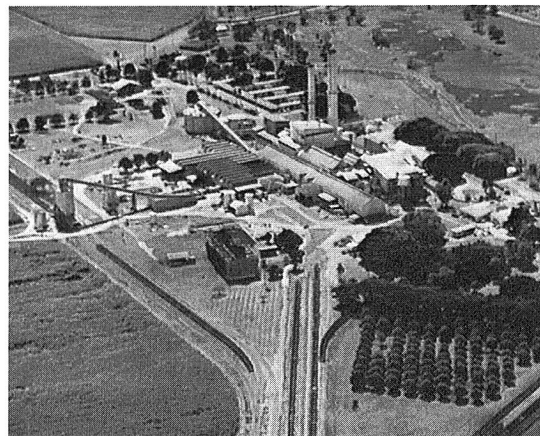
Rainbow applies a limited number of fixed, bold colours across the spectrum from red to blue. The Steps control determines which artificial colour replaces what original shade.

Posterize, Distorted and Waves play with a reduced colour scale, colour distribution and/or video noise. Zebra does similar things in greyscale and Threshold limits the picture content to pure black and white in varying degrees.

Grabbing frames

All special effects, including the Frozen Video option, are real time modes only and can therefore not be saved to disk. To grab a frame or field from live footage, the user must access the Stillstore.

The TBCplus offers either one (1 Mb VRAM) or two (2 Mb VRAM) frame buffers. Direct addressing of the frame store



Special Effect Distorted, step 32.

means the instant the Freeze button is clicked, the action on screen comes to a halt. If the picture looks as intended, it can immediately be saved to disk, with no prior rendering required. If not, the Freeze button can be clicked again in rapid succession until the result is perfect. Another option is returning to live video and previewing the footage to determine when to freeze the action again.

As mentioned before, rapid movement in a scene can lead to extreme still frame jitter. To solve the problem, the Stillstore panel offers the choice of either limiting the complete incoming signal to single field mode or just saving either field of a frozen frame.

The resulting pictures are generally quite usable, although they will only fill half the screen height when displayed with most Amiga software - if you load them back into the TBC's frame buffer, they'll be full screen.

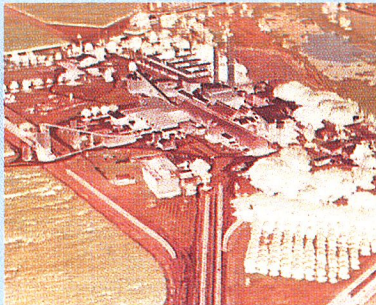
On the subject of image formats, the average Amiga owner can choose between either standard IFF 24 bit or compressed JPEG, apart from the less well supported Caligari .6rn and Y/Cr/Cb (4:2:2 raw). Graphics loaded from disk should be in high resolution overscan or will otherwise have a nasty black border.



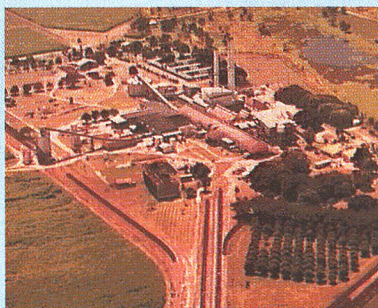
Special effect, False Colour



Special effect, Negative



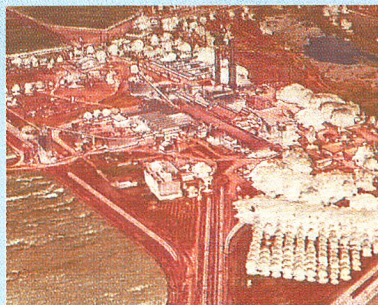
Special effect, Negative II



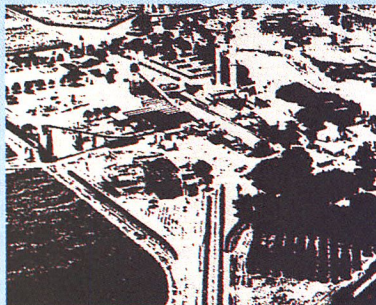
Special effect, Posterize, step 32.



Special effect, Rainbow, step 32.



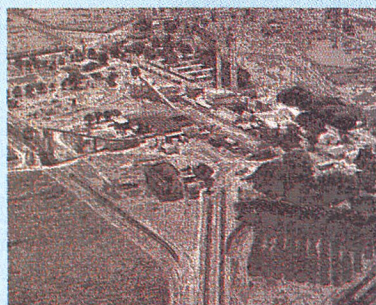
Special effect, Solarize, step 32.



Special effect, Threshold, step 32.



Special effect, Waves, step 32.



Special effect, Zebra, step 32.

Conclusion

GVP's TBCplus is comparable in price with a decent genlock/framegrabber combination, and has a lot to offer. Its output quality will be hard to match, the frame grabbing is instantaneous and image processing leaves little to be desired.

Operation is simple enough even for the novice videographer, but special configuration and calibration options ensure it's suitable for professional use as well.

Those who can live without overlaying titles and graphics onto live video should seriously consider the TBC in favour of a genlock if the budget doesn't stretch to both.

The reward will be rock-solid stability and perfectly sharp copies, easy still image generation and a wide choice of special effects. If you are blessed with the creativity to shoot great footage, the TBCplus will certainly help you to put everything on tape the way you intended - and for many years to come, judging by the excellent build standard.

Please note that I had to re-record the accompanying special effects images to be able to grab them. They are consequently second generation stills, with noticeable loss of quality.

For more information read our TBCplus review in Vol 11 No 3 or call Peripheral World on (03) 725 3233.



Amiga: The Future

An interview with David Pleasance

By John and Janet Bickerstaff

*(With commentary from various
Commodore engineers and editorial
staff here at Amiga Review.)*



► On Tuesday 6th September 1994 we arranged to meet David Pleasance, joint Managing-Director of Commodore, at the European Computer Trade Show in London. This is what he had to tell us.

Management Buy-Out

We are, in fact, about two weeks behind what our schedule was. We had planned to announce the successful management buy-out of the assets of Commodore International and Commodore Electronics at the ECTS. The reason why we are two weeks late is that two weeks ago Colin Proudfoot and I were in New York with Coopers & Lybrand (who are acting for us), one of our investment people, the Liquidator and the Liquidator's lawyers, for a meeting which took approximately five hours, which you can take as a positive sign that the Liquidator is taking us very seriously. The purpose of that meeting was two fold. One was to establish finally what can and cannot be delivered in terms of what is available for sale. The second reason for the meeting was to determine exactly how our bid was to be structured to make it

easier for the lawyers. To say that the situation with Commodore and all the subsidiary companies is complex is a major understatement. All the companies have cross-shareholdings and trading arrangements. The net result is that we were told (and it came as a major surprise to us) that the Liquidator could not, as previously promised, deliver to us all of the component parts inventory which is currently in the Phillipines, and that formed a very major part of our business plan to enable us to bring products to market for Christmas.

That meant that we had to come back to the UK, get in touch with all the component suppliers from around the world, find out whether they would supply us, find out how much it would cost to get our product put to the front of the queue, how much for air freight, work out how many machines we can build and the profit on them. In other words we had to draw up a completely new business plan in order to satisfy our investors, and that we have done in just two weeks, but we are two weeks behind on what we originally planned.

Coopers & Lybrand have now drafted an unconditional draft agreement, which is what the lawyers asked for, and that effectively says, this is our offer, this is what we want and, subject to you delivering this to us, we will pay you. That will be delivered to the Liquidator today. We have put on the bid a validity period of ten working days to come back with an answer.

However, life was never meant to be simple, the US courts have yet to decide whether they wish to intervene. They have the option of letting the Bahamas do it, doing it in conjunction with the Bahamas, or taking it themselves, which is very unlikely. We should know within ten working days from today whether we have got this or not. We are very confident about it because we know that the other players are doing nothing, but nothing is certain in life.

Research and Development

The 17 Commodore engineers currently residing in Norristown, US, are extremely happy to work with us, and we have budgeted to



immediately take them back up to 60-65 people. The way that we will run the R & D Centre is that there will be a team of about fifteen people, who will be looking after current technology. Their role will be to support existing products and to manufacture derivatives and new products from our present architecture. The remainder will be working on new technology. And that is exclusively RISC.

We have canned the AAA project completely, and the reason is that although the chips are virtually finished, there is no operating system, and this would take eighteen months to bring to the market. In addition, we will be bringing Chris Ludwig over to the UK permanently, and he will head up a team of about twenty people whose sole job in life will be to support developers.

This will be a major step forward to strengthen our relationship with the developers. Within six months we will have development systems for the RISC product and those systems will go selectively to the development community. I intend to loan them the machines until they have developed products and, when they start to sell these products, I expect them to pay me for the machines. For the first time we will have developers able to work on new software before the hardware hits the market.

Current Technology

We intend to establish sub-license agreements with companies who make third party products and who have ancillary products who are not in competition with us. We have established a good relationship with NewTek and Scala, and we intend to allow them to use our hardware in whatever manner they see fit to sell more systems.

We will be prepared to work very closely with anybody who wants to develop third party pe-

ripherals that will help us to sell Amigas, and that again is a complete change of attitude from Commodore in the past.

Marketing

We expect to have products coming to market around the middle to end of November and, because of the component part situation, we will have less CD32s and A1200s that we wanted to meet demand, but we will major more on A4000s. This gives us the opportunity in the UK to support the independent dealers and we will feed them the bulk of the products and likewise in European countries.

New Products - Amiga card for the PC

There will be no new products this side of Christmas for obvious reasons. As soon after Christmas as we can, we will have the CD drive for the A1200 and the expansion box for the CD32, and then within a few months we will have new products using existing technology. One of those products is almost certainly going to be an Amiga on a PC card.

This will probably be a sub-license deal with another manufacturer. This could be a very substantial business because everybody who has a PC wants to turn it into a multimedia machine and an Amiga on a card could be a very cost-effective solution.

The Way Forward

We will be having a forum in the UK, and one in the US, very quickly after we have got the company and that forum will basically be to talk with everybody saying, look we have got a blank piece of paper, we can go in any direction you like, tell us what you want so that we can all swim in the same direction.

This forum will be for anyone interested in the future of the Amiga.

Change of Name

The company name will almost certainly be Amiga International and we will not be using the name Commodore anywhere. The new company will be based at Maidenhead. The products will be manufactured in the UK, possibly by ICL, who can provide warranty and support.

Shows

We are doing the Motor Show. There is part of the Motor Show called Future World and that is at the NEC at Birmingham from the 18th to the 30th October. What they have got is the Motor Show, the Ideal Home Exhibition, and Future World on at the same time. One ticket gets you into all three shows. Future World contains a ride which was manufactured for BMW for last year's Motor Show in Frankfurt. This ride takes you through a series of shop windows with live people working in them (a bit like the EPCOT Center).

It carries two thousand people an hour and we have a stand right where everybody gets off this ride. 800,000 to a million visitors are expected at this show. We are also doing In the City, which is in a hotel in Manchester, and is the music industry's main show of the year. There we are going for the Guinness Book of Records. We are going to live record, and live video some music artists, MPEG encode it, add some graphics, and produce a CD in the fastest ever time.

The Future Entertainment Show is at the same time as the Motor Show, but we may try to support it. The World of Amiga Show is at Wembley on the 9th, 10th and 11th December and there will be a User Group area.

In Conclusion

It is most important for people to know that the Amiga is saved. Twelve weeks ago we had not even mounted a management buy-out and it is an amazing thing that we have put together. We intend to strengthen our support for user groups like ICPUG - why re-invent the wheel?

Viewpoints

The above interview stimulated considerable e-mail discussion. One school of thought held that the Amiga won't last a year without AAA, which is a bit of a shame because the general consensus was that even with the actual chipset functionally complete, it'd still take more than a year to build the new parts for the operating system and get the combination to market.

This is because, according to ex-Commodore engineers like Spenser Shanson and Chris Green (now working at the 3DO corporation), it would take at least 12 months to produce a graphics.library to work with AAA, and this doesn't even account for unknown bugs in the chips and all the other extensions to the operating system (new trackdisk, audio and so on). If there has been no significant work done on an AAA-specific AmigaDOS, this would explain Commodore UK's decision to give the whole system up as a lost cause.

Ex-Commodore sources say AAA was meant to be as much of a kick in the pants to the computing world as the original Amiga, but in the original plans was meant to come out much earlier - 1990 is one date mentioned. Thanks, the story goes, to Commodore mismanagement and complacency with existing Amigas, it got held back until the company was in too much trouble to produce it, and

now, given the above schedule, it could take until 1996 to get AAA to market, by which time Chicago/Windows 95 Pentium based machines will most likely be the industry standard, with fast 24 bit graphics, plug and play architecture and no memory restrictions - not even of the Amiga chip/fast type. AAA might be more elegant in its integrated design, but not by much - it'd be lost in the tidal wave.

Other commentators suggested that Commodore, if unwilling to go with AAA itself, should subcontract it to someone else and do a profit share agreement, as it has already done with some other Amiga related technologies like the Envoy networking system now handled by Intangible Assets Marketing.

The counter-arguments to that are that Commodore has no need for competing but not necessarily compatible Amiga-style hardware designs in the market, whether or not it gets a slice of the pie, and also that there likely wasn't anybody much interested in a chipset with similar specs to other graphics workstation technologies but without any sort of real world testing or even a production run.

Dave Mansell of Citadel Software, UK, wrote about what he knows about the successor to the AAA architecture - the "Hombre HP RISC+Gfx" 3D-RISC chipset. He left Commodore later than Spenser Shanson, who departed before this new system was being talked about.

Apparently the original plan was to design an advanced game console with a new limited console operating system - just enough to play games, not real DOS that you could use for "serious" work. So, according to him, building the OS for the RISC system would be just as laborious as building the new bits of AAA, if not more so, be-

cause in order to use the old code you'd have to build in a 680x0 emulator.

More than a few people, however, disagreed with this opinion, and pointed out that a RISC based PCI bus architecture would bring a future Amiga machine more in line with what the rest of the industry was doing, which is not a bad thing, because RISC/PCI is not hobbled by the need for compatibility with any previous hardware (like the 80x86 based IBM compatible architecture) and if your hardware's more standard, it becomes much easier to come up with a multiple-OS, generally compatible computer that can run all sorts of things.

In the face of all this information, of debatable reliability, it's a good idea to keep a firm grip on the few definite facts.

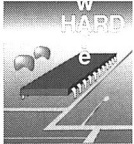
Commodore UK is, essentially, the only runner left in the race for the Amiga. They are hence very optimistic about getting it, but nervous about how long this will take given the continuing legal machinations.

Assuming Commodore UK do get the Amiga, they'll be manufacturing AGA machines again very shortly, and working on more gear using that same chipset. AGA is not the cutting edge, but it'll get cheaper and cheaper and getting inexpensive, reasonably powerful computers into the hands of the masses is a good thing - just look at the C64.

Some time in the future, assuming the new Amiga company makes enough money from sales of AGA, we'll see a new whiz-bang RISC based monster chipset. But it won't happen overnight.

In the meantime, we continue to wait, and hope.

□



Tabby

a graphics tablet for \$200!

By Daniel Rutter

► The mouse is now a perfectly normal piece of computing hardware. In the early 80s nobody knows how to use them; now mousing comes before typing in importance. However, people are, generally, much better at managing fine gradations of control and smooth movement when using a pen than when using a mouse. So, for artistic and other fine work, a pen-type input device is the way to go.

A few unfortunates tried to make pen-mouses - pen bodies with weeny mouse balls in the end. Most of these had a stupid plinth at the bottom and couldn't be used on an angle. Awful. Terrible. Appalling. Big graphics tablets, on the other hand, give you a stylus and a plastic plate to move it over, and give fine control, perfect pen-like action which may include pressure sensitivity and a huge hole in your wallet. Also not ideal. MicroGraf's Tabby tablet aims to bridge the gap - it's a proper, though small, tablet, and at \$200 it's less than twice as expensive as a top-grade mouse.

Installation

Amadeus supply the Tabby with a 25 to 9 pin adaptor, which lets you plug its IBM style cable into your serial port. If you've got a modem or other piece of hardware plugged in there already, you'll need to swap it out or get yourself a serial switch box, which will let you use one or the other without cable swapping.

TabbyControl is a commodity - you can run it from Workbench, automatically from WBStartup or from the shell and all options are always available. All of the tooltypes and shell options are dealt with in the manual. You must have Workbench 2 or higher to use the Tabby.

Using It

The Tabby's working area is only 125 by 95mm - much smaller than that of any tablet I'd seen before. There's more plastic around the edges of this area, but there's no sensing grid under it. On the plus side, the small size means the Tabby can fit in anywhere - it takes up less space than a mouse mat. On the minus side, it means that fine movement can be tricky - pixel by pixel movement on unmagnified high resolution screens needs more room to move than the Tabby gives you.

You have to relearn your mouse skills in order to use a tablet - they use absolute positioning, rather than tracking movement only when they're in contact with the surface. What this means is you can lift the stylus at any time and put it anywhere on the tablet and the pointer will immediately leap to that position. This is good once you get the hang of it, but mouse users used to the unnatural pick-it-up-and-shift-it strategy will be disoriented for a while.

Given the small size of the Tabby, it's quite easy to get around its entire surface without

making orchestra conducting arm movements. For ordinary Workbench controlling, though, or clicking buttons all over a screen, even this quite small area can be annoying. The TabbyControl software therefore lets you reduce the active area, so you can have your whole screen covered by an area the size of a postage stamp. Speed benefits a lot from this, but accuracy becomes commensurately lousy.

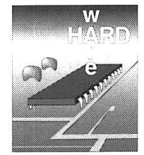
A better idea is to use the Tabby for artwork or whatever, and keep your regular mouse to and as well. The Tabby works fine with the mouse - you just park the stylus in a little clip on holder so it doesn't fight with ordinary mouse input and the rodent's back in business.

The Tabby's stylus is a traditional wired model, with a hinged tip that moves a little when you press down. There's a definite microswitch click to tell you when you've made contact. There are no other buttons, but you can still activate the right mouse button at any time using either Alt or Control. Whichever of the two keys you don't set to be the right mouse button becomes the double click button - holding it down and clicking does an automatic double click. Double clicking, and to a lesser extent even single clicking, is tricky with the Tabby because the stylus bends a bit when you click it, and at first you tend to move it as you click, resulting in missed buttons and crooked lines.

Problems

The Tabby communicates with the computer through the serial port, at 9600 baud. This means that your system has the equivalent of a full blast 9600 baud modem link happening all the time. On 68030 or better systems this is not a problem; on 020 you notice it; on 68000 it can be a big slowdown.

Continued on page 66 . . .



SCSI on a budget

Review: Oktagon 2008

By Dr. Michel J. Brown.

► Oktagon 2008 is a SCSI-2 controller card with up to 8Mb of RAM for Amiga 2000 to 4000 computers. The card also functions as a hard card, with supplied mounting hardware.

A SCSI-1/SCSI-2 3.5 or 2.5 inch hard drive is required. I installed a Quantum 1080 Empire SCSI-2 hard drive. You don't need to install RAM, but if you choose to it takes 1X4 ZIP chips in groups of four, either Static Column or Page Mode. The card is processor independent for compatibility, but a faster CPU probably means higher speed.

Software

The Oktagon comes with HD toolbox program on a single disk. Surprisingly, this works with all versions of AmigaDOS. All features work with Workbench 2.1 or later - some are disabled under earlier versions. The software uses the Commodore Installer program, and is therefore easy to install.

Review

The card comes with the mounting hardware for the drive, a

short 50 pin ribbon cable and a power cable. The documentation is well written, and includes both a step-by-step and expert installation description. Throughout the book are suggestions, warnings, and helpful tips about hard drive installation, use, and maintenance.

One unusual feature in the toolbox software is the ability to update the AmigaDOS type through the corresponding utility. You can also save the Rigid Disk Block contents to a file on a floppy should disaster strike.

All in all, this is a fine product from a supportive and growing company, and I would highly recommend getting the card if you are in the market for a fast and inexpensive host adapter.

Likes and Dislikes

I like the ease of use, the intuitive system that is completely style guide compliant, and the use of many of the advanced features found on the more recent AmigaDOS upgrades.

About the only dislike I had was that in order to properly partition the hard drive, I had to enter the number of blocks manu-

ally. This requires a calculator or a lot of mental arithmetic, rather than using the sliding gadgets found on other, more intuitive installation tools.

One surprise was the inclusion of the program GigaMem. This virtual memory manager is included in the startup disk supplied, and includes the documentation, but not the registration. As GigaMem sells for \$79.95 (US funds) at my local Amiga dealer, it makes for the frosting on the cake, so to speak.

Comparison to other similar products

I have owned three controllers and three drives, and the Oktagon compares favourably. As it stands, it's easily the fastest and most compatible of the three controllers I have owned.

Unlike previous products, this one was up and running in less than half an hour, which by my previous experience is a record. The external 25 pin SCSI connector is also a plus, and has provision for both snap-on and screw-in connectors, while past controllers used only one or the other.



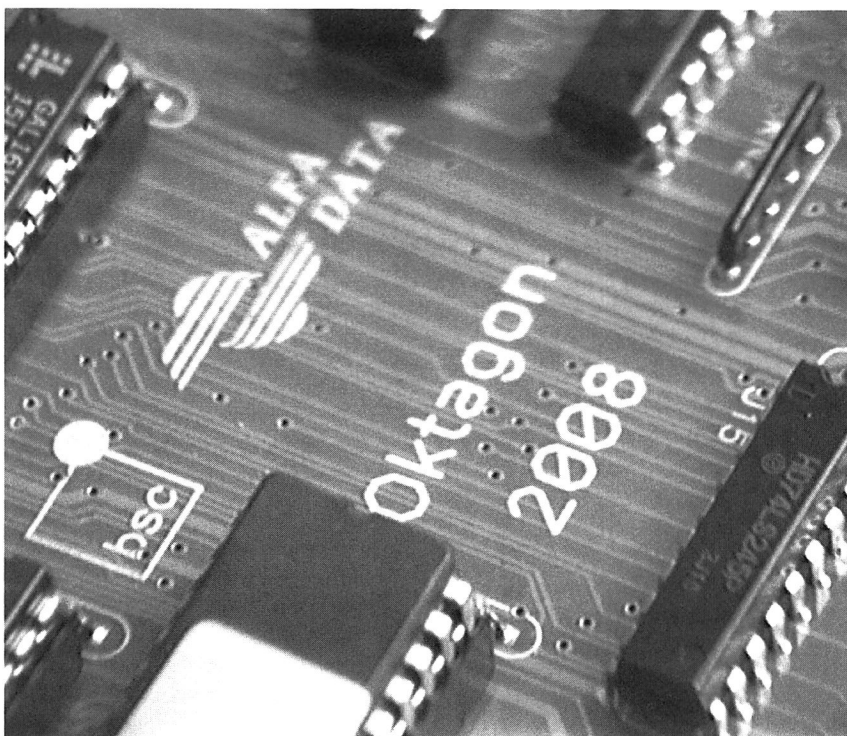
Full addresses and phone/fax numbers are supplied, but the hot-line number for technical support is sent back only after they've received your registration card.

Conclusions

This is an excellent product at a fair price. According to SysInfo 3.14, I get 2.5 MB/sec reads, and 2.48 MB/sec writes. Diskspeed 4.2 also gave very high marks.

I'd give BSC and Alfa Data (the manufacturers) a rating of 4+ stars out of 5, and a full five stars if they make the appropriate changes to the partitioning software.

Contact BSC Broautomation AG in Germany on ++49/89/ 357130-0; fax ++49/89/ 357130-99).



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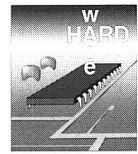
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The Amiga 2000 Revisited!

By Cliff Elliot

► Are you in the market for a reliable, inexpensive Amiga? A second hand Amiga 2000 could be just the thing.

I am an Amiga 2000 owner, have owned it since 1988, and I can't understand why the A2000 never became a hot favourite with the masses - although I suppose price and bad marketing had something to do with this.

This was my first computer; I purchased the 2000 because of its expandability, and boy have I expanded it, with hard disks, extra drives, extra memory, accelerator, digitisers, modem, the list goes on. Only your imagination- and budget- seem to limit what you can do with a 2000.

Moving Up

Another nice feature of the 2000 is its amazing reliability. I have used the 2000 nearly every day since the middle of 1988, and have moved house twice, and it's never missed a beat.

I may sound as if I think this machine is perfect - far from it, but for what you can pick them up for now (I shudder to think of the money I paid in 1988) and then the

ability to pick up reasonably inexpensive peripherals second hand, the 2000 becomes a very powerful and inexpensive base to work from.

Some of you might now be thinking that this is all well and good but what about the graphics ability and 32 bit architecture of the Amiga 1200/4000?

The 2000 as a base machine is 16 bit and only capable of showing 16 colours in high res, but with the addition of an accelerator with additional 32 bit RAM and a 24 bit graphics card the 2000 can blow the AGA machines out of the water in many departments.

The Alternative

Back in 1988 when I purchased my A2000, a friend of mine bought an XT IBM clone. Since then, he has had to upgrade to successive new models to keep up with the demands of the software and his working environment.

In effect, he's had to buy three more machines - 286, 386 and 486 - and learn a completely new operating system (well, Windows, anyway) along the way.

But by owning the Amiga 2000

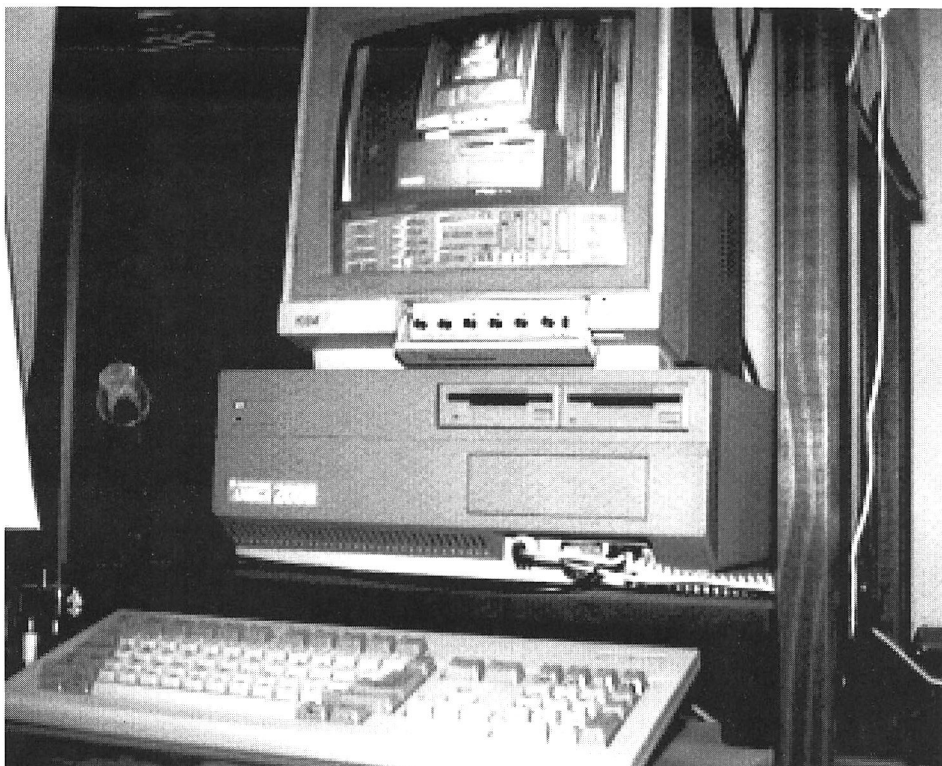
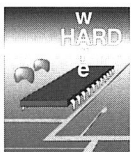
I not only had a base machine that I could soup up as I could afford it without having to go out and buy another computer every time, but I also had an operating system that grew with the machine.

This gave me complete continuity of machine equipment and software. Where today most software written for the Amiga will run seamlessly under Workbench 2 and above, the same can't be said of IBMs with their confusion of operating systems and hardware variations.

I am now making money from the 2000 by doing, among other things, desktop publishing. For example, I have produced a number of newsletters, gained a contract to produce 2500 full colour handouts for an engineering firm, and done many one off full colour posters printed by a bureau. I've also done titling for the wedding videos I produce.

I also use the 2000 on a daily basis to do a lot of spreadsheet work, write quotations and make up technical drawings for the company I work for as a Hydraulic Engineer.

We have 486 machines at



work, but I prefer to do most of my work on the 2000. When I have to use the clones at work I generally bring the files home with me on disk and use CrossDOS to use them on the Amiga.

"It may not be the cutting edge, but with extra hardware there's little you can't do."

Drawbacks

The only complaints I have about the Amiga 2000 are minor. The first and most niggling is the fan in the back of the machine, which is a tad too noisy.

The second is the placement of

the power switch at the back - I've no idea why computer manufacturers persisted with this practice for so long.

Third, they could have made it a bit easier to take the cover off the machine. Other than those problems, I have found the 2000 to be quite practical.

Where to get it

There is not much more I can say regarding the A2000, other than to suggest that if you are looking for a cheap second hand computer and you think that in the future you may try your hand at more professional work, then take a good hard look at this machine over, say, an even cheaper A500, or for that matter even a second hand A1200.

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Image Processing for Video

By Patrick Kirsch



► In the world of video design there are many techniques for creating video sequences for commercials, show openers and so on. Source video may be gathered in the studio or in the field, or it may be rendered by 3D software, or hand drawn as cel animation, but one thing you can be fairly sure of is that it will undergo some kind of processing before it reaches the screen.

For the most part, this processing occurs in real time in the on-line edit and is performed by equipment such as time base correctors for colour and brightness control, vision switchers for fades and wipes, downstream keyers for title superimposing, and digital video effect units (DVEs) for flips and page turns.

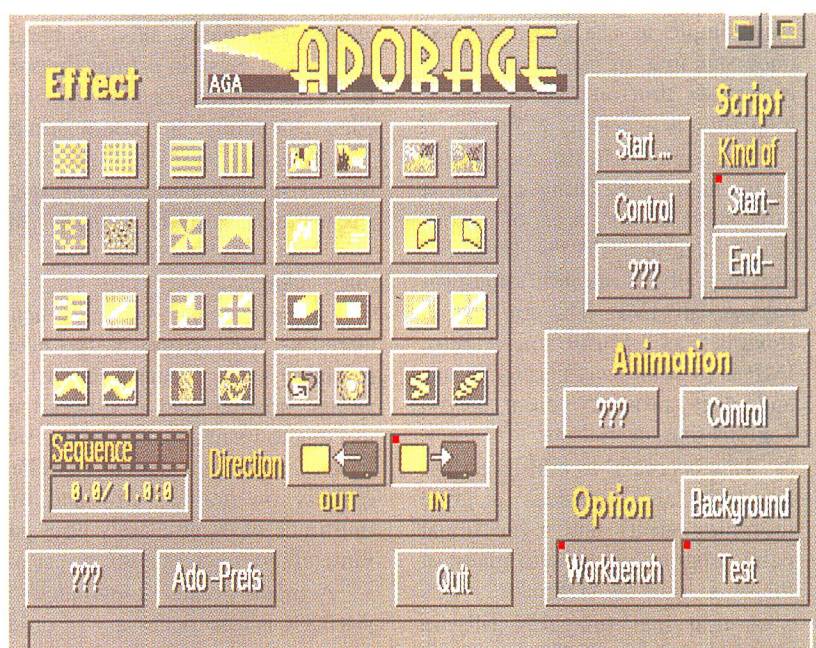
The most sophisticated special effect machines are produced by the Quantel company, and called Hal, Harriet, Henry and Harry. All with price tags approaching the gross national product of a small country, they can record video to disk, layer multiple streams of video and create 3D effects, among other things. The goal for the less well heeled is to achieve these kinds of processing effects

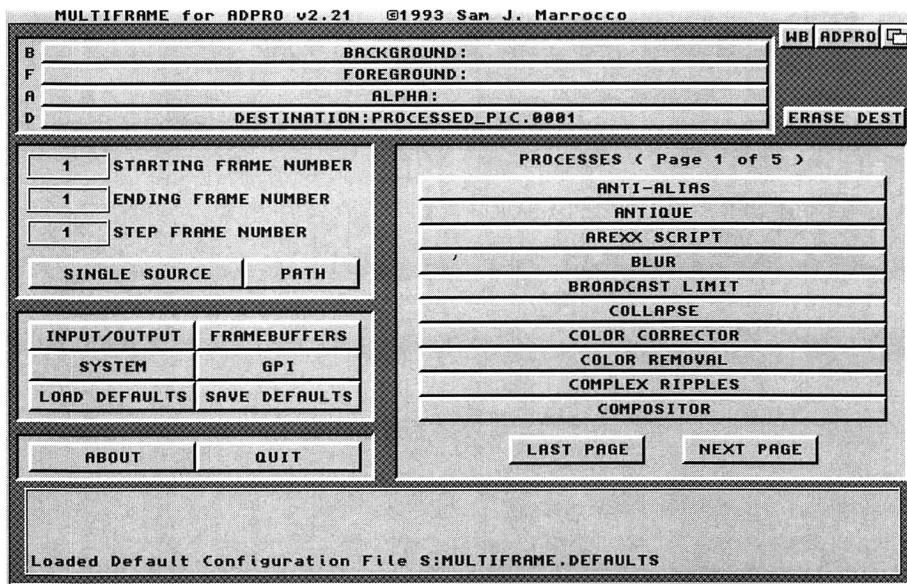
on the desktop.

Image processing on the Amiga is dominated by one name: Art Department Professional, from ASDG. ADPro's range of loaders, savers and operators is extensive, so I won't attempt to outline its abilities here - see the ACAR review in July, 1994 - but I will mention its one great shortcoming. ADPro does not have a proper multiframe processing interface.

The included interface, FRED, is acceptable for simple applications like batch image conversion, but irritating if you want to do serious video work.

The solution is a separate multiframe processor. There are two available: Pro Control and Multiframe for ADPro. Of the two, Multiframe is by far the best. It can select a source image or sequence, an alpha channel





sequence, and a foreground sequence and perform any ADPro operator on each frame, even varying operator parameters across the length of the sequence with spline curve interpolation.

It can composite two sequences using an alpha channel sequence as a wipe pattern, it can create perspective fly-ins or sphere wraps, dissolves, multiple ripples and other effects that would otherwise require elaborate AREXX scripts to achieve. Multiframe's reasonably simple to use given a good understanding of ADPro, but the manual is thin and some experimentation is necessary at first.

Although Multiframe-ADPro offers many interesting effects, it falls short in the area of colour keyed layering. GVP's ImageFX provides a built in multiframe processor call IMP. Though not as flexible as Multiframe-ADPro, IMP is in some ways easier to use and does provide colour keyed compositing, or matting.

This is crucial to multilayering. ImageFX also provides a good morphing utility and a functional paint program along with many of the same tools as ADPro.

I find that ImageFX fills in

most of the gaps left by ADPro and Multiframe-ADPro except for one significant problem - ImageFX's matte operation is hard edged, resulting in jaggies and colour fringing.

If you've ever seen a TV programme with a presenter chroma-keyed in front of a backdrop image and noticed a blue halo around the presenter you'll understand what I'm talking about.

The highest quality chromakey systems provide a soft edge matte which eliminates this problem. Black Belt System's Imagemaster R/T also provides control over the edge blending in compositing. This program sports a huge selection of tools including morphing, suggesting it could provide all your image processing needs in one package.

Unfortunately, however, whenever I've tried to use it I've been forced to seek counselling afterwards. Imagemaster is difficult to use due to its unusual interface, the lack of a printed manual (it relies entirely on online help) and the multitude of parameters within parameters for each operation.

A much greater knowledge of AREXX is also necessary in order

to do multiframe processing. Imagemaster is powerful, but too slow for use in a professional environment.

"Professional" is a term that is bandied about far too readily. Like "broadcast quality" and "multi-media" its meaning has become hazed by hyperbole. Adorage, from ProDAD, describes itself as "professional video effects", and indeed its name derives from the word "ADO", an industry standard type of DVE system made by Ampex costing upwards of \$30,000. Can this \$199 program really compare?

A DVE is most commonly used as a transition between two shots. The simplest transitions are cuts, dissolves and wipes. Beyond these are DVE's like flips, pushes, slides, page peels and so on. These sorts of effects require considerable computational power to do in real time, but can be rendered one frame at a time with more modest hardware.

Image processing software such as ADPro and ImageFX can be used to produce dissolves, wipes and some kinds of 3D DVE's with limited success. Adorage attempts to solve this with a graphical interface offering four banks of four effects, plus timing and direction controls.

The effects range from checkerboard and venetian blind wipes to page peels and perspective flips. Most effects have a number of adjustable parameters.

Software installation is painless enough, but the manual is less so. Inside a ring-binder large enough to hold War and Peace comes a tiddling little German-translated manual of just 64 pages. The program interface does not comply with standard Commodore Intuition, but it does multitask. The somewhat cryptic manual makes the non-standard interface more difficult to master, but a little

persistence soon pays off.

The flow of the program is simple enough. First, you set global parameters - number of frames, direction of transition, backdrop image, Super Smooth Animation (SSA, ProDAD's own proprietary format) or individual IFF save. Then you select an effect, modify parameters, select the image file and set image size and centre. Adorage then renders the transition.

An SSA can be played back immediately from within Adorage, or the individually saved frames can be compiled into an anim with, say, DPaint.

The results are good and look a lot like professional DVEs, except for two problems. Firstly, Adorage does not support IFF24 images, it only handles source pictures up to 256 colours. Second, Adorage can only manipulate still images, not sequences.

These two points alone immediately disqualify Adorage from the Professional Club, in my view. I did, however, find at least one good use for Adorage; it can produce excellent alpha channel wipe sequences for use with Multiframe-ADPro or ImageFX/IMP.

Adorage is a great idea, but it's not fully realised. I dream of a single program that can solve all my image processing needs in one intuitive system. For a long time I hoped that Opalvision would be my saviour.

OpalPaint stands up favourably against dedicated paintbox systems from Quantel and Spaceward, and contains many of the image processing tools found in ADPro and ImageFX. Given a multiframe "front end" like Multiframe-ADPro, and maybe a brush animation system like that found in DPaint or Brilliance, Opalpaint would be formidable.

And what of the Video Processor/Roaster Chip? Real time

DVE's, colour processing and chroma/luma keying with true alpha channel for less than \$20,000!

I, like most Opal users, have waited increasingly less patiently for this marvel for two years now, only to find now that in order to get one I must rip my Opal main board out, pack it up and ship it to the USA, and wait who knows how long for it to be modified and returned. Looks like I'll be waiting a little longer yet.

So it seems, as usual, there is no one simple solution. If, like me,

you are handling captured video sequences as well as rendered animations and outputting the results with a PAR or by single frame recording, you will need as many tools as possible.

ADPro with Multiframe, ImageFX, Opalpaint, Dpaint, Montage24 and Adorage all grace my Workbench. If you are slightly less ambitious, Adorage, DPaint and ClariSSA (see sidebar) on an AGA machine can offer some excellent creative potential. □

clariSSA

ClariSSA from ProDAD is the sister programme to Adorage. You can use Adorage without having clariSSA, and vice versa, but if you're planning to work with the SSA format, both would be advisable.

So what is SSA?

SSA stands for Super Smooth Animation, a proprietary format from ProDAD, and when I say proprietary I mean proprietary. SSA's cannot be used in Scala, DPaint or any other Amiga animation or presentation software that I know of.

SSA works by playing animations at 50 fields per second rather than 25 frames per second, thus interlacing the frames the way that normal video does. This produces a more smoothly flowing effect which is further aided by SSA's use of data compression. How this data compression works is not clearly explained in the clariSSA manual, but hey, if it works, who cares?

ClariSSA is simply a tool for converting ANIM5's into SSAs, editing them and playing them. The conversion process is simple

and quick, and the resultant file is generally much smaller (a 8.5 MB ANIM5 I tested converted into a 5.2MB SSA).

The animation can be split, shortened, inserted in or appended to other SSAs easily, as the format supports a different palette for each frame and clariSSA provides good editing tools. The result is a basic non-linear editor. Your final edited show is limited by your available RAM, as clariSSA is unable to play back from hard drive. At least I don't think it can - the manual, again, is unclear.

So do SSAs play back faster?

You bet. So much so that you'll find yourself trying to slow them down! The best way to do this is to create your animations to play 50 frames per second rather than 25 frames per second. This negates the file size saving mentioned above, but the animation looks terrific.

If SSAs were more compatible with other Amiga software, I would not hesitate to recommend clariSSA to anyone who doesn't own a PAR or single frame recorder. As it stands it is something of an oddity, with limited uses.

PageStream 3.0

First Impressions

By Stuart Farrell

► No-one expects a perfectly smooth first release of a major upgrade. Maybe Soft-Logik wanted to come close, but they bowed to public pressure and released version 3.0 early - alas there are bugs and holes. Thanks to Emerald Creative we got our copy of PageStream 3.0 and eagerly installed it to see if it lived up to all the "change the way you think" hype.

The manual (which by the way, was created with PageStream) is great. Don't let the thickness put you off, it's an easy read, filled with step by step instructions that even the clown on the cover could understand. Apart from all the usual how-to-use-this spiel, it has five lessons on creating letter-heads, newsletters, forms, tables, and brochures and another whole chapter on book publishing.

There's also tidbits of info in the margins for the light readers. A comprehensive index and well thought out design make it about the only manual you'll read this year!



Up and Running

The installation follows standard Commodore guidelines and we had no snags with the original disks or the 3.0a upgrade that surfaced about a week after the first version. You'll need about 12 megabytes of disk space for a full install - which includes a generous helping of fonts.



The program opens with a small window on top of the main screen called the Navigator. It's designed to make Pagestream easier to use for beginners. For starters, it lets you access the huge

help files quickly or take a tour of the program. In the help files you can mark and unmark lines, print all or only marked text, do searches for documents or text, and there is even a bookmark that you can place and jump to later. You can also start a new or open an old document. There's a handy tip displayed each time you run - like Microsoft's Word 6.0.

But before you get to this neat little menu, you're faced with something people are already complaining about. Until you register, you must type in a temporary password everytime you run PS3. This is a simple anti-piracy, please register device - which is well and good if you're the sort who registers things and



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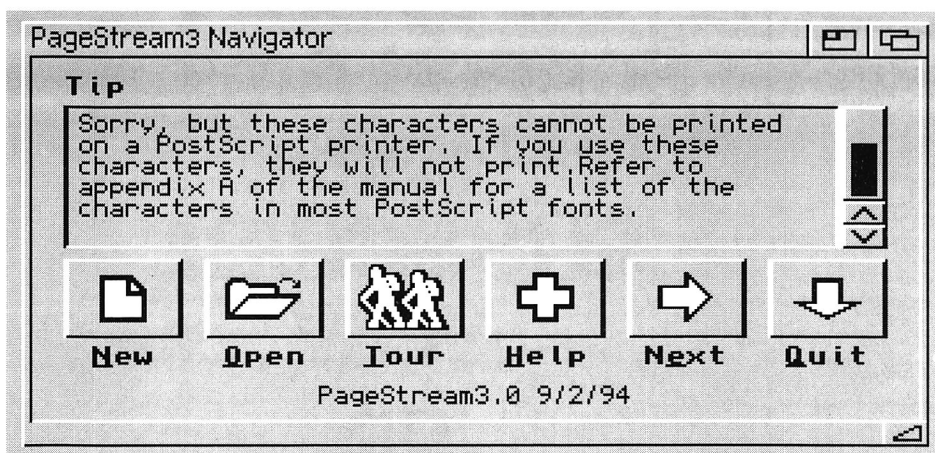
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trusts the return mail from the U.S. to supply the needed permanent code. A local registration point would be a good thing.

In the mean time, there is a simple way around this annoying step. Using Fkey, one of the standard Workbench 2.x commodities, click on "New Key", then insert the letters of a key you don't use, for example F2 - if you type a wrong key in, it will tell you. Then choose "Insert Text" under "Command" and type your password in, hit return and then save defined keys. Now when you run PS3 and are prompted for your password, just hit F2 and return.

Updates and Missing Bits

Sadly, there are no groovy documents to peruse for a quick check out of what all the features do. This is probably because you can't use all of them yet. The first free update was made available from the 22nd of September, so here is the current list of features not implemented yet, which are listed in the original readme. (By the time you read this, there will probably be another update - 3.0b.)

Our biggest gripe remains the very, very slow speed at which text may be edited and formatted. Use of an external text editor is recommended for the time being.

Unimplemented Features

- Append
- Save Template As
- Revert
- Plate Control
- Place
- Export text
(not all formats export yet)
- Paste
(text in text frames is not pasted)
- Undo
(only for object features so far)
- Find and Replace
- Spell checking
- External text
- External graphics
- Send to Editor
(only for BME - bitmapped pictures, not for text)
- Document Structure
(you can't drag yet. Click on icons to create)
- Layout/Information
- Facing Pages
- Greek Text
- Bold and Italics
(applied bold and italics aren't done yet, and the buttons do not select the designed styles)
- Outline
- Weight commands
- Text Line/Fill
- Paragraph Format
(bulleted paragraphs are done)
- Auto Hyphenation

The Navigator - Softlogik trying to make life easier for beginners. And it works. The online help is excellent and those handy tips are a great idea...

- Insert Soft Hyphen
- Conditional Break
- Picture fencing
- Object/ Information
- Gradient/Shape/Radial
(done to Postscript. Only linear 0,90,180,270 gradients done to screen and non-PostScript)
- Bitmap fills
(done to Postscript, but not screen or non-PS)
- Misc line/fill
(most are done to PS, but not screen or non-PS)
- Trapping
- Text Wrap
(offsets and modes 3 and 6 are not done)
- Text Anchor
- AutoBackup
- Typographic Prefs
- Edit Hyphenation
- Edit Kerning
- Font/Style palettes
(partially done)
- Page palette
(only shows page icons)
- Pen tool
(can only draw basic line segments)
- Reshape tool
- Edit palette
(done except for multiple selected objects)
- Primera driver
(use Preference driver for now)
- Canon driver
(use compatible Epson or Preference for now)
- Landscape printing
- Double/triple click to select text

Features

For a feature comparison with Professional Page 4.1, XPress 3.2 and PageMaker 5.0, see Volume 11, No 8. The comparison was released by Soft-Logik. I managed to find a few mistakes in the Pro Page column which were easily made by someone who took a cursory glance through the program. So, there may also be oversights about the other programs listed. Nonetheless, no-one could argue that PageStream, when complete, won't be the best DTP program on the Amiga, and indeed one of the best on any computer system - full stop.

It's feature packed. Everything has been well thought out and thoroughly implemented. In future articles, we'll look at individual areas of PageStream, but for now, we'll stick to the overall feel.

Working with PageStream

A feature rich program can be both a curse and a blessing. PageStream is surprisingly easy to navigate; the windows are easy to follow, the menus a breeze to work through. Our only major complaint

is the program's speed. The current version is too slow - from the refresh speed of imported graphics to the snappyness - or otherwise - of menus.

PageStream continues to follow many of the basic strategies laid down in version 2.2. Text without text boxes, applied styles and numerous other slight oddities are all there. These are things that seem a little illogical at first, but quickly become second nature.

Moving up from Professional Page

Soft-Logik have gone to some length to ensure upgrading from Professional Page is reasonably painless. To help you find equivalent ways of doing things, at the Navigator, click on help and under topics choose Professional Page feature finder.

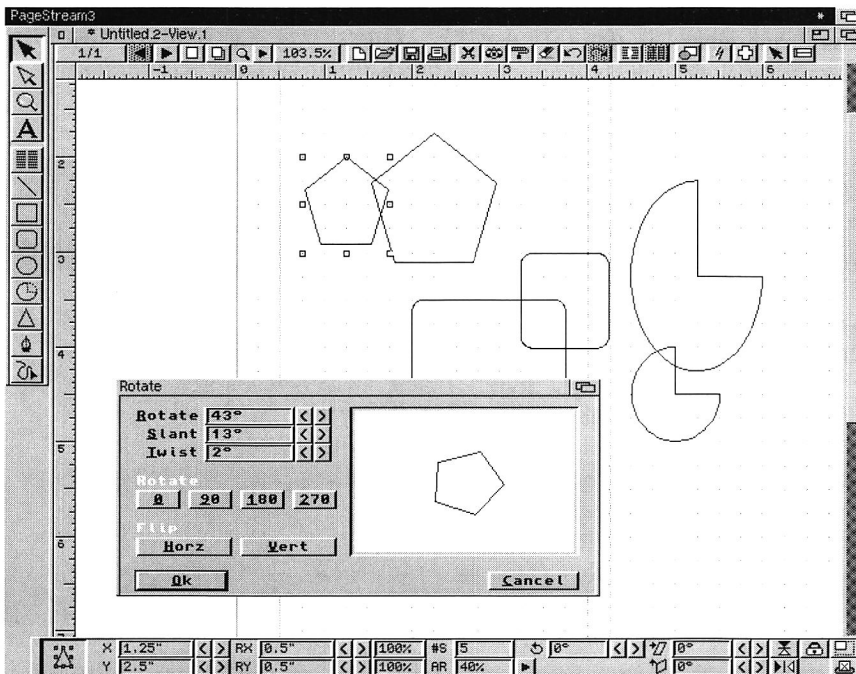
There are only a few features in Professional Page not in PageStream 3.0.

These are the next/previous linked box tool, interruptible refresh, wireframe graphics, page visible, page save current - you can however save a page into a

clipboard and then create a new document and paste the page into the document and save.

Apparently, you can load your ProPage 3.x or 4.x folios into PS3. What's the catch? Well, the ProPage file format is not publicly available, so it had to be determined through trial and error. We are the guinea pigs. Having trouble loading in folios to PS3? Send them away for examination by the PS3 tech team. We couldn't even get some of the simplest of folios working, although others have reported no problems.

A few of the basic shortcut keys in PS3 are the same as ProPage, but the icon bar at the top makes it just as quick to simply click once on the appropriate icon.



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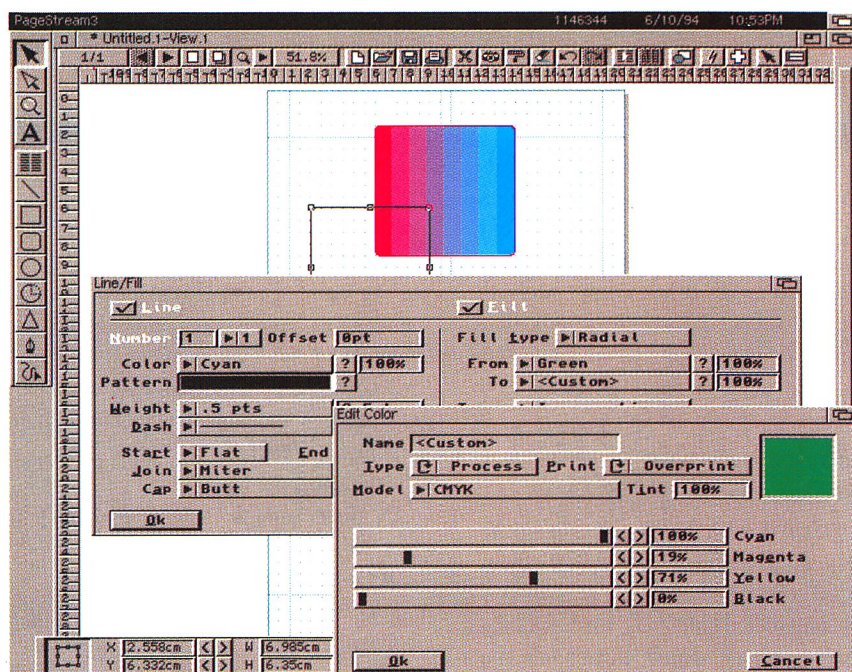
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Moving Up from PageStream

PageStream 1.x and 2.x users can load in documents too. PS3 converts them to IFF doc files. However, there is a conversion warning. Text will likely be reformatted. Mirror is handled by rotating characters. Light happens by using an appropriate fill percentage and justified text will be converted to equivalent tracking option. Arrowheads differ and we've heard of other oddities which are being addressed right now. Version 3.0a still had a few problems in this area.

Colour Control

Using PageStream you find yourself repeating the same line over and over. "Hey, they've thought of everything... I wonder if this works." Every little feature has been optioned out to the max!

Take colour control. Let's say you want to fill a box with a colour. I could spend a week talking about the fill options, but I'll stick to colour for this example. There's a ? gadget on

next to the selection bar. Choose it and you're in the edit colour window. From here you can work with a number of different colour models - or ways of describing a colour.

First you can choose between Process or Spot colour. You can select to overprint the colour when it's printed on top of another colour, or to simply knock out a white gap to fit the top colour into. You can enter a tint of the described colour, quickly dial up a percentage of grey or select a colour from one of eight other colour models - CMYK, RGB, HSV, HLS, Coated, Process, ProSim and Uncoated. Once you've selected the colour, PageStream will display a colour swatch showing how it will look on-screen.

The trouble is, it might look different on paper. The Amiga lacks any method of colour calibrating a monitor - so you'll have to make do with a near match. Nevertheless, colour selection in PageStream is very sophisticated, very flexible and a giant leap from any previous Amiga DTP pro-

gram. We're lining up a comparison with Mac DTP giant, Quark Express - so stay tuned for a real world platform comparison hopefully by next issue.

Overall

Pagestream 3.0 is a program with great promise. Right now it's too slow, and there are too many things missing for us to consider producing Amiga Review using Pagestream.

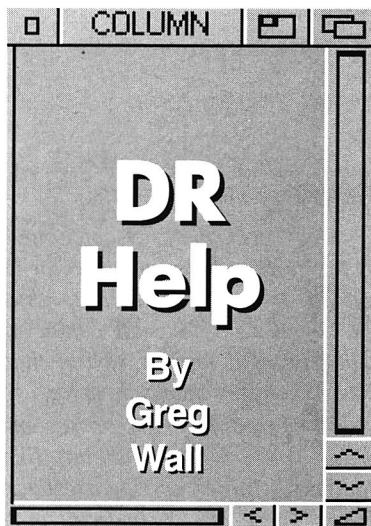
However, the feeling amongst everyone we've spoken to is that Soft-Logik will eventually get it right, and it's been nice to take a look at what's coming and start to familiarise ourselves with the program ahead of time.

We'll keep you posted on updates and start reporting on individual aspects of the program over coming issues. Our advice now is to wait for 3.0b (probably available by now) and even then, be prepared to work with what may at times seem a little unfinished. Don't bother if you don't have an accelerated machine, lots of RAM and a big hard disk.

Pagestream 3.0 is distributed in Australia by Tupsoft (Solutions Rendered) on (02) 838 0733.

NEXT MONTH

An in depth look at PageStream 3.0B, BME and Pageliner, plus comparisons with desktop publishing software on other computer platforms. We also invite your feedback on using PageStream 3.0.



AMOS Problem

Dear Helpline, I currently own an Amiga 2000 with a hard disk and WB2.05, and am dabbling in some programming with AMOS Professional.

I have been working on one specific program with quite a few procedures and GOTO statements (the GOTO statements cause a jump between procedures). I have reached what I would consider half way and decided to compile my program to see the difference in speed, and I continually get a compilation error.

The error is "Label not defined on same level of procedure", I have looked in both my User Guides and can't find what this error is. Can you help me, or at least point me in the right direction, as I would need to compile this program at some stage and uncompiled it's relatively useless to me.

Thank you for your assistance, and I must say I really like the new format.

**Damien Drummond
Stephens QLD**

A.C.A.R: *Dear Damien, now we come to stage two, debugging the program you have written! Here are a few things you may wish to try to begin with.*

Try to increase the buffer size on the editor and also the program and see how that goes. There is also a chance that you may be doing something illegal in the program

(for example check to see where your GOTO statements are and if you are if fact allowed to use GOTO statements between procedures).

Another person you may wish to make contact with is Wayne Johnson, known as Sausage on the BBS's. He writes the AMOS column in A.C.A.R. If you run off a copy of your program with a really nice letter and send it to him he may have a look at it and try to compile it for you.

A small donation may even speed up the reply. His details: Wayne Johnson, P.O. Box 168, Willoughby 2068. Best of luck with your programming.

RAM Mistake

Dear Helpline, I need some help and advice for my A500. I recently opened my A500 to put in a hidden ID number, and noticed four empty sockets where the chip RAM is. Next to them was written 512/1MB.

I thought I could use them to upgrade my A500 to 1Mb chip RAM instead of using the expansion port. I ordered the 4 chips and capacitors and had them put in. But, to my surprise, the A500 isn't recognising the extra memory. It just uses 512 Kb, and when I put my A501 RAM expansion in, my Amiga stops working.

If I take it out it works fine but only with 512k. I was told by a friend that I need a jumper cable to the Gary chip for the extra memory to work, where can I get this jumper cable from? Can I still use the expansion port after the cable has been put in, or do I need another jumper for it?

Can I do this myself or who could I contact to get this done?

**Nigel Kerr
Elliot Heads, QLD**

A.C.A.R: *Hi Nigel, Let's see if we can't sort this out a bit. To begin with, upgrading to 1Mb chip isn't that simple.*

You cannot use your new chips and A501 at the same time. The problem you are having is that you have both sets of chips trying to address the same memory location.

There are a few ways you can go to get more chip memory. If you still want to use the chips you have bought, you will need to ensure you have either a 8372A or 8375 Agnus chip, and you won't be able to use the A501.

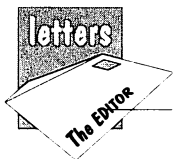
On JP2 on the motherboard (near pin one of the Kickstart chip) there are three links. Let's call them A, B, and C. By default B and C are linked. This needs to be changed to A and B. Also, JP7 needs to be cut. As long as you have taken out the clock it should then work giving you 1 meg chip. The A501 will be useless.

Another way to do this would be to send the chips and capacitor back and get a refund, and use your A501 memory expansion card as another 512Kb of chip memory (giving you a total of 1Mb chip), in this case on JP7 A, B and C are linked by default and need both links cut. You'll need to modify JP2 to an A and B connection, as above.

The best way to do this is to get something like the DKB or AX2000 boards. These give you up to 2Mb of chip memory and still allow you to use your internal clock, plus allow you to add fast memory as normal.

They're are specially designed boards that plug into the motherboard and allow you to plug up to a 2Mb Agnus chip in. There is normally a jumper or two that run to the Gary chip and the processor. I presume this is what your friend was talking about.

In any case you are probably



best to get it installed professionally by someone like Keyboard Electronics at Southport. Their number is (075) 916188.

Checksum Confusion

Dear Helpline, I am writing to you to help me overcome a problem that has cropped up on our family's A1200 (fitted with 40 meg HD plus a DKB 1202 card with 1 meg of fast ram).

My son attempted to install a game onto the HD's "Work" partition by moving its icons across into the "Work" window. When the game did not work from the HD (it runs OK from disk), he attempted to remove it by dragging the icons from the "Work" window, apparently successfully.

Now when the A1200 is booted up and the "Work" partition is accessed, the following requester shows:

SYSTEM REQUEST
WORK HAS A CHECKSUM
ERROR ON DISK BLOCK 2701
RETRY CANCEL

By clicking on the cancel option, the window disappears and the Work partition can be accessed. We have found no problems yet running any of the remaining programs on the partition - the requester seems to appear only as an annoyance.

I have run the Workbench HD-Toolbox to find out whether the above block, 2701 is a "bad block" - but HD Toolbox can find no bad blocks anywhere..

Could you please explain to me what exactly a checksum error is, and if possible, how to remove it - hopefully without reformatting the partition!

NO NAME

Waramanga ACT

A.C.A.R: Well to begin with I'm not quite sure what you mean by dragging the icons to uninstall the game - hopefully your son dragged them into the Trashcan or selected the games drawer and choose delete from the pulldown menu. It seems that here for some reason there was a hiccup.

HDToolbox will only find a problem if there's something wrong with the actual drive itself, which can be mapped out as a bad block. The computer would then ignore the suspect section of the hard drive,

In your case, however it is just a problem with the data on that part of your hard drive.

The checksum is a number that is calculated by the system to make sure that information in a block does not get changed without the system knowing. Basically this is the system running an error check

on the files on the hard drive.

This checksum is recalculated by the system every time a sector is loaded. If it doesn't come up with the answer it expects, then a requester will appear saying that the block has a checksum error.

The first thing I would recommend you try is something like Amiback Tools or Quarterback Tools. These are commercial programs that look at your hard drive and try to fix any data problems. There are also a few freely distributable programs that do a similar job, though typically not as well.

Depending on how much information you have on the partition, you may find it faster to back up your drive and then format the partition.

If you do this, make sure that you use the standard format from the pull down menu and not quick format. When you re-install everything again all should be ok.

The problem with the program not working from hard drive in the first place might be that there are some hidden files on the original disk that you didn't copy across. Many games aren't hard drive installable at all; if they are, they typically have an installer program included.

□

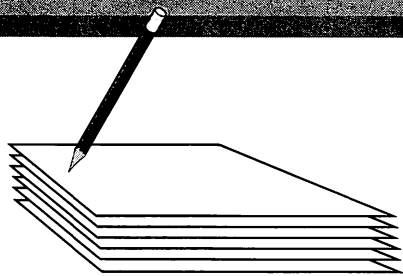


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Whither warranties?

I have just read the article in the April edition of Amiga Review called "Warranties and Your Rights". I purchased an A2000 in November 1993. Just recently I was told that it needs a new motherboard - at a cost of \$290.

The machine is still under warranty, since it's under 12 months old, and I have been told that nobody is honouring the warranty for Commodore equipment.

Compu-Aid should be dealing with the warranties - but I have been informed that they are not by the shop I bought the A2000 from (World of Computers, Ashmore).

I am wondering what should happen and what I'm entitled to. Should the shop I purchased the computer from replace and repair the motherboard when Commodore are bankrupt? Are they just taking advantage of the situation?

They say I need to pay \$290 for the replacement, with labour free. I am not willing to pay this, and would appreciate any comments you have.

**Clint Roots,
Nerang, WA**

Ed: Technically, your contract is with World of Computers, and if the product they sold you fails to perform as it should have (as detailed in the April article), it's up to them to solve the problem.

Commodore going broke has nothing to do with it, because you didn't buy the computer from Commodore, you bought it from World of Computers.

However, as always, it's not that simple. World of Computers probably don't do their own repairs - few computer stores do. In this case, it seems they've forwarded the job to Compu-Aid - this seems likely, because Compu-Aid

have of late been prescribing motherboard replacements for a whole range of ailments, whereas such drastic action is generally not required very often. Compu-Aid had a contract with Commodore to do warranty work, for which Commodore paid them, but now there's no Commodore to pay and so the contract is void.

This means Compu-Aid are perfectly entitled to charge for warranty repairs - but they're not charging you, they're charging World of Computers. Legally, World of Computers should absorb the cost of the warranty repair - the risk of having to do this now and then comes with the territory when you're a retailer, and should be covered in the prices charged for original purchases.

In situations like this, though, its common for retailers to pass the costs on to their customers, which technically is not legal but is very difficult to prevent since it'll cost you a lot more in money, time and aggravation to get Consumer Affairs to deal with the problem than the \$290 you're up for. By all means mention that you know about this law - often that's all you need to do to get things moving - but if the dealer's determined to obstruct you there's no economical way out.

In the real world, the best compromise is to send your machine to a different repairer - here in NSW, for example, Sibnet in Chatswood (02 417 7600) or a specialist Commodore repairer like Unitech in St. Andrews (02 820 3555) might well find a cheaper way to solve the problem.

Warranties II - This Time It's Personal

I would like to let Amiga users know about my dilemma concerning Commodore warranties.

In December 1993 I bought a new A1200, and a fine machine it was (note - WAS). I've been with Commodore since the birth of the C64, and I knew the A1200 would be an excellent choice,

backed up by reliable service. I was wrong.

On July 18th this year, the A1200 died on me. The screen went black and then the machine reset itself, still presenting a black screen. Turning the computer off and on didn't help - still black.

I called the dealer I originally purchased the monitor from. They refused to take it at first, even when I told them it was still under warranty. After getting my legal rights from Consumer Affairs I went to see the dealer and told them that under the warranty they had to take the machine and get it serviced. After talking to them and mentioning Consumer Affairs they were happy to oblige.

It has now been about two months since they took the machine to get it serviced. After constant calling I found they had sent it to Compu-Aid, who are handling Commodore warranties. A little while ago I called Compu-Aid.

I was told that the A1200 needed a whole new motherboard and it would have to be ordered from Germany, but at the moment they are not in production, so it could be another two months!

I'm now wondering if I will ever see my A1200 in working order again.

This letter is to let people know that if this happens to them, they should just hang in there. I'm sure that Commodore will not let down five million people, and that Compu-Aid are doing their best to help all of us.

**Scott McCoy,
Ulverstone, Tas**

Ed: This is another slant on the issue. In this case you managed to get the dealer to do the right thing, but all that means is passing on the job to a repairer and absorbing any expense.

If the repairer (there's Compu-Aid again, and another new motherboard...) keeps the machine for a million years, there's no clear-cut regulation that says the dealer has to do something further about the situation.

If there's no way to fix the machine

other than a new motherboard it is indeed quite possible that there aren't any in stock; you could try the abovementioned other repairers, but don't expect miracles.

Amiga Review Late?

First I must say that you produce a good magazine, when you can get it that is. How come it is so late lately? It used to arrive to the newsagents around the first week of the month and now it doesn't arrive to the newsagents till the middle or closer to the end of the month.

I notice that the PC Review is in the newsagents around the first week in the month - Why not ACAR? Keep up the good work (sooner the better).

**O. Holm
Curra Country**

Ed: Okay, you've got us. We're running late! But, we have a good excuse. Yes, Amiga Review has changed hands - and with the change came the move to a bigger 96 page all-Amiga produced magazine. The down side of the deal was that we didn't actually land the business until late June - too late to get July out on time.

However, we decided to try and catch up and have managed to make up some ground. The July '94 issue went on sale on the 21st of July and since then we've made up over a week. Pretty soon we should be back to the start of the month, so please hang in there and we promise we'll get it back on time.

Pirate Software Sold By PD Company

Just last month I decided to order some PD disks from a PD company I saw advertised in your magazine. Only a few weeks ago did I receive the disks I ordered plus an update of their lists. Upon booting up this list I found a file called PIRATE.

Not wishing to jump to any conclusions, I loaded the program to

relieve any doubts. But, alas, for there it was written the names of more than 6000 pirated disks ranging from A-Train to Zool 2.

I have included the disk which was sent to me for your own inspection. These disks weren't included on the first catalogue disk because you have to order some disks from there before you can receive this special disk.

I sincerely hope that you reconsider having them advertise in your magazine and also hope that they go out of business along with a hefty fine.

**A. Bryant
Warrnambool**

Ed: It is one thing when friends swap the odd piece of software. However, this sort of black and white commercial piracy is very damaging to the software industry. It is immoral and illegal. Thank you for alerting us to this problem.

We have checked the disk and indeed it contains the file you described. We've also been able to confirm from other sources that this disk has been sent to many other customers of this company. They will no longer be permitted to advertise in Amiga Review, starting from our next issue.

What to buy!

I need a computer for basic accounting and business word processing. I also would like to get into 3D rendering at some point, but that's not a priority.

Naturally, all my friends tell me to get a cheap IBM, but I got an A500 when they first came out and love it dearly - is there a cheap way I can get a business-ready, expandable Amiga?

**Bruce Kent,
Padstow, NSW**

Ed: There certainly is. New A1200's aren't dreadfully expensive, but in standard spec you only get 2Mb of RAM and a 40Mb hard drive, which is adequate but not great.

You also can't put a 24 bit graphics card in a 1200, and true colour graphics are virtually a prerequisite for 3D rendering these days. A4000s are far more expandable, but also expensive. An old A2000 might do you; these are dirt cheap today and accept all the common expansion cards.

For more information about this idea, check out our article on the subject on page 23 - but for any sort of serious use you'll have to get it with an accelerator card, and the basic hardware's as old as your 500.

A better idea might be to grab a second hand A3000. 3000s are getting very cheap these days, considering what you get - 2Mb chip RAM, at least 4Mb fast RAM, 68030 processor standard and an excellent record for reliability, plus both Zorro II and III slots for every flavour of expansion card. Expect to pay around \$1600 for a machine with some nice extras and a monitor.

Second hand 3000s aren't as common as they used to be, but you can still find them; 2000s are everywhere and 500s, often with hard drives and other bits on, are in plague proportions. It's a seller's market at the moment for new Amigas, but the oldies are good value.

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Letters to the Editor

Each month we publish the most interesting letters we receive. Think of it as an open forum where you can view air your opinions, share ideas or ask questions. Around half a page is a good length.

The contents may be edited for brevity, accuracy or legality. If you don't wish for your name and suburb to appear at the end of the letter, please say so. Not all letters are answered, but all are read. Send your letter to Amiga Review Letters, PO Box 288, Gladesville 2111.

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CD32 Games - Microcosm \$65.00, Whales Voyage \$25.00, Dangerous Streets \$25.00, Trolls \$25.00, Fire Force \$25.00, Overkill and Lunar-C \$20.00, World Cup Soccer \$30.00. All new in boxes. Phone Greg (02) 7592494, after 6PM.

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For Sale C64 games - 40 titles, all on disk, no pirated stuff. Includes 4 x SSI Gold Box D&D, SSI Buck Rogers, Wasteland + (clue book), original Elite, Microprose Soccer. Beat'm'up's, shoot'm'up's, text adventures. Send self addressed envelope to, Terry Baker, 3/5-13 Dellwood St, Bankstown, NSW, 2200 for a full listing and price's or phone (02) 790-5374.

For Sale: Golden Image B&W Hand Scanner, suit any Amiga \$220, also Prowrite 3.3 - \$50. All near new. Ph. (097) 572898, ask for Steve.

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Vidi Amiga 12 Real Time. Colour image capture and editing from video source. Includes hard/software, power supply (and parallel cable) and manuals. Three weeks old, still in box, not wanted, must sell! Phone Glen, (059) 987376 after 5pm. \$380.

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Graphics boards and mode promotion

“the true cost of high performance”

By Heiko Wymen

► The new generation of high resolution, true colour display boards may let us move beyond AGA, but the step is not as cheap as the comparatively low prices seem to suggest.

Much has been written about the expansion devices which, more than any others, allow you to transform even the oldest "big box" Amiga into a cutting edge graphics workstation. With the Retina, Picasso or Piccolo, to name just a few, A2000 - 4000 owners can view and work on 24 bit images at high resolutions in real time.

However, while graphics boards have become quite affordable, there are still some serious hidden costs and shortcomings.

I was reminded of this fact when I received the new software for GVP's popular EGS card which, at last, introduced mode promotion, a feature some of the competition had offered right from the start.

Mode promotion is basically a software solution for intercepting a program's command to open a custom screen and instead displaying it on another, normally

unsupported screen. It allows the use of applications which would otherwise not be compatible with the non-Amiga modes of 24 bit boards.

In the case of EGS, only those programs specifically written to work with the board, open a screen on the Workbench or make use of the Amiga's display database were usable with the older software. Now it is possible to run a spreadsheet like Maxiplan, normally restricted to work just in standard or interlaced high resolution, on 800x600 (SVGA), 1280x1024 or even 1600x1280 screens, - as long as the monitor is large enough to keep everything readable.

But while it may be possible to adjust most spreadsheet type programs to any screen size they are displayed on, the same does not necessarily apply to other software.

More often than not, promoted software only opens a window up to the size of its maximum internal resolution on a larger screen. In other cases, a program may refuse to be promoted altogether.

Hungry for memory

With the most recent EGS software, a surprisingly large amount of software becomes displayable on high resolution screens. To take full advantage of the new modes, though, the computer must have lots of memory. This applies especially to OS 2.x machines, where it is necessary to map the ROM contents (Kickstart) into FAST RAM before the Workbench and other WB-type screens can be displayed in up to 256 colours; Kickstart eats 512k of RAM by itself.

In this latter case, 6Mb of memory is not sufficient any more for Art Department Professional (ADPro) to load a high resolution 24 bit image. EGS-SpectraPaint still manages to put the picture on screen, but the Undo buffer is lost and brushes are out of the question.

Leaving Kickstart in ROM frees enough RAM for ADPro to work and SpectraPaint to activate its Undo function, but for more demanding tasks the computer should have a minimum of 6 to 8Mb of fast RAM. Any kind of serious multi-tasking will require at least 10Mb.

Unfortunately, even with lots of RAM, only programs fully supporting RTG (Retargetable Graphics) or Workbench type public screens can display more than the basic pre-AGA 16 colours in high res. This is especially restrictive for paint programs.

Personal Paint, for example, accesses the display database of the Amiga 1200 but fails to recognise the new modes added by the EGS board on a 3000, although the manual says it should work. This means you can promote PPaint onto any EGS screen, but without taking advantage of either the resolution or the available colour range for the actual painting. This is not much of an improvement.

Public promoters

ESP, the mode promotion program supplied with the EGS board, also has problems with some badly behaved software titles like KindWords3. Nine times out of 10 this just caused the Amiga to crash. Other programs were simply ignored and responded as always, opening on the screen of their own choice.

As there are quite a few freely distributable promotion programs available, I took the opportunity to compare them with the commercial product. The promoters can generally be split into two major categories. Some programs are targeted at giving the user control of the screens opened by programs, forcing them to comply with either 50 Hz (PAL) or 60 Hz (NTSC) video modes or scan-doubling or de-interlacing the output to the monitor. Although they have little to do with the mode promotion required for graphics boards like the EGS, they can be quite handy.

Nico Francois' AmigaToNTSC, for example, lets owners of a 1084 monitor display high resolution screens in NTSC, which consid-

erably dampens the dreaded interlace flicker and thus makes it possible to work for longer periods with less eye strain.

NTSC4NTSC is more concerned with letting you get the PAL or NTSC sized screens of your choice instead of having a specific program take the decision away from you. It can also promote interlaced to double-scan displays for flicker-free viewing on SVGA or multiscan monitors on AGA Amigas. In addition, it allows you to change the colour scheme of older programs to provide a Workbench 2.x look.

Both programs do what they promise and are quite easy to set up, although NTSC4NTSC must be started from the command line while AmigaToNTSC only needs a few icons moved.

DoubleX, another command line activated patch, emulates the Mode Promotion provision in Workbench 3.0's IControl Preferences and can therefore only be used with AGA machines. In contrast to Commodore's own facility, it ignores even screen specific calls from programs like DPaint, to display flicker-free images on 30kHz monitors.

The works

The other major category of mode promotion software is made up of much more versatile programs. They stretch from powerful but awkward to set up utilities to

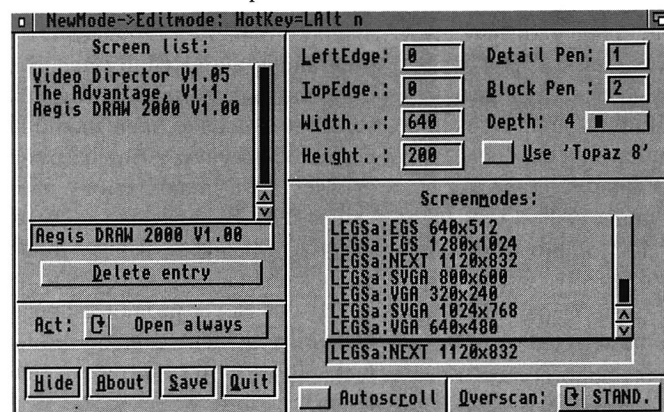
up-to-date, elegant solutions controlled via simple interfaces. All seem to have their individual problems with certain applications, but overall they make it possible to use almost any program, regardless of age, with almost any display mode, native Amiga or not.

None of the promoters manages to overcome the maximum number of colours restriction limiting many titles, especially when run on ECS machines, although the screen displaying the application may have up to 24 bitplanes.

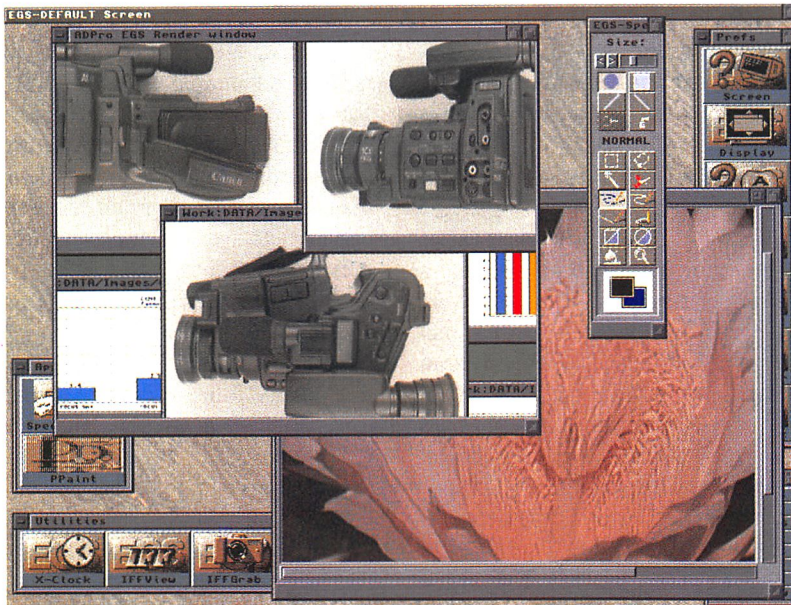
PKludge uses unfriendly tooltypes to tell it what and how to promote, but it can perform a number of valuable tasks if its user takes the time to get familiar with the options. Some knowledge is required to avoid crashing the computer, especially as you can also reposition screens so the monitor won't need adjustments for each resolution.

In practice, when an application asks for a certain screen, PKludge checks whether this mode has been added to its promotion list. If so, it automatically opens an altered screen according to the values set in the tooltypes. Otherwise, it lets the program go ahead without any changes.

If this sounds a little daunting, the shareware program Promotor requires even more experience from its users. Again, it lacks a graphical interface, relying instead on an ASCII configuration file. A



NewMode's interface allows selecting additional parameters of the promoted screen.



text editor that accepts long lines is essential for preparing the file, as most screen parameters can be redefined, including size, depth, offset, overscan, autoscroll, font and so on. Promoter is without question the most powerful of the programs in this article, but it's not up to modern standards.

Elegant solutions

Just the opposite applies to the last two promoters, which have a very similar appearance on screen to the commercial ESP.

NewMode is a commodity, and can therefore be easily managed via the Amiga's Exchange utility. Its GUI resembles the Workbench screen mode requester, and can be set to appear automatically whenever a program is initiated, when an unknown application is started, or never. The names of already stored screens (tasks) and/or a newly requested display appear in a window. If a program tries to open an untitled screen, the user must give it a name.

Another window shows all the available modes for promotion or demotion. Autoscroll and Overscan, screen position and display size may also be selected.

Apart from stubbornly ignoring

a number of applications like PPaint, NewMode proved easy to use and stable. It even returned DPaint to the PAL display of its choice, without crashing, after initially promoting its opening screen to a higher mode.

PPrefs started badly - DPaint crashed - but otherwise this promoter worked with most programs. Setting PPrefs up is simple. All modes available are listed in two double window displays. All you have to do is highlight the screen(s) to be promoted in one and the substitute(s) in the other. If specific screens or tasks need to be promoted individually or not at all, they can be added to a third list.

Commercial quirks

The EGS card's ESP has an interface not unlike the Workbench's display requester. Whenever a program is activated for the first time, the user is asked whether the screen it intends to open should be promoted Always, Now, Not now or Never. Depending on one's choice, the GUI appears for choosing the enhanced display mode. Those applications selected to be Always or Never promoted appear in a list which can be edited manually. A tick in a separate

gadget indicates whether a screen will be redirected or not. As E.S.P. is based on process recognition, instead of global display modes, it promotes any application known to it, independent of the screen requested.

This can easily become annoying because command line requests - for example when trying to read files from within a file manager - are not identified as part of the same task and throw up the promotion requester every time.

Apart from the occasionally irritating behaviour of the requester, ESP performed well with most programs. DPaint and KindWords3 were the most notable exceptions.

Conclusion

The high display quality achievable with 24 bit graphics boards can match the best of the competition. Unfortunately it requires large amounts of memory and the range of software able to take full advantage of all modes is presently still rather limited.

Mode promotion gets incompatible programs to run on high resolution screens. While many programs can make use of the better display, an at least equal number simply open a small window on the bigger screen, refuse to be promoted altogether, or crash.

Nevertheless, even at this price, enhanced graphics boards are worth it. More and more new software is RTG compatible, and getting an old program like Fusion Paint to run full screen on a 1280x1024 display is certainly more than just interesting.

Of all the promoters, PPrefs seems to offer the best compromise between ease of use and practically required power features. If only someone would come up with a way to let promoted software use higher numbers of colours...

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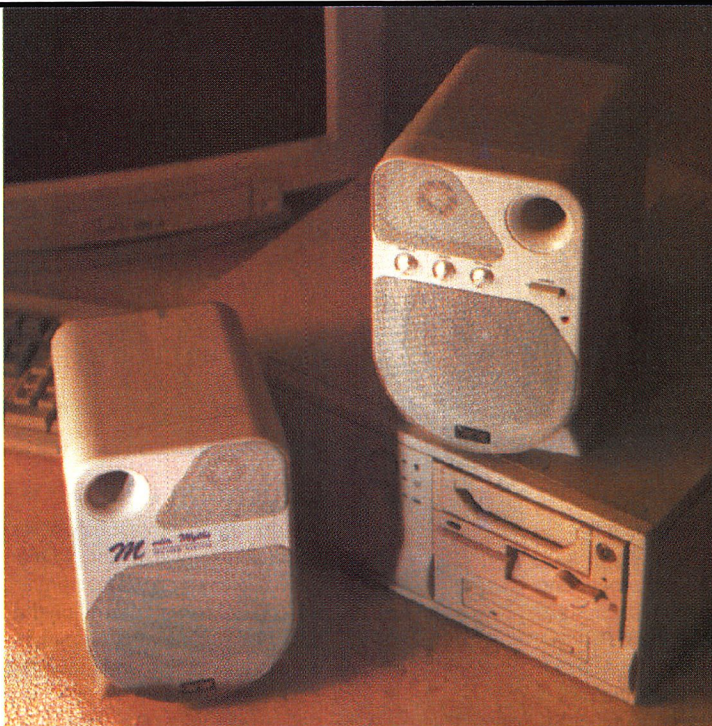
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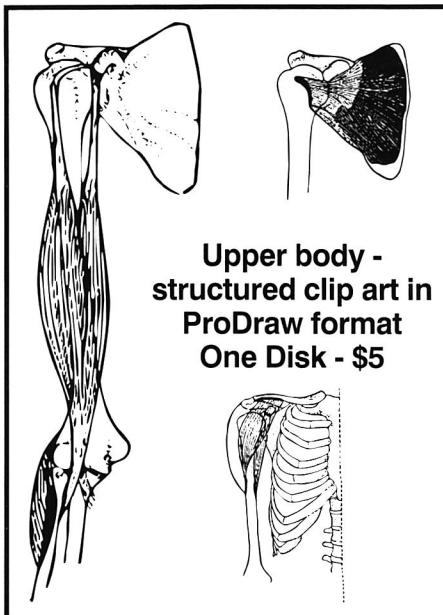


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Adams, Douglas	Hitchhiker's Guide to The Galaxy, The	Gullif Publishing	1998
Baum, L. Frank	Wizard of Oz, The	Mandarin Publishers Limited	1993
Bersford, Dick	Uncensored Boy's Own, The	Macdonald & Co (Publishers) Ltd	1990
Boardman, Tom Jr	Science Fiction Stories	Octopus Books Limited	1983
Burnet, Frances Hodgson	Secret Garden, The	Octopus Books Limited	1983
Carroll, Lewis	Alice's Adventures in Wonderland	Octopus Books Limited	1981
Clarke, Arthur C	2001: Odyssey Two	Granada Publishing Limited	1982
Clarke, Arthur C	2061: Odyssey Three	Crafton Books	1989
Crichton, Michael	Jurassic Park	Random House	1991
David, Jim	Garfield: Here's Looking at You	Ravette Books Limited	1985
David, Jim	Garfield: Life And Laughs	Ravette Books Limited	1986
David, Jim	Garfield: We Love You Too	Ravette Books Limited	1985
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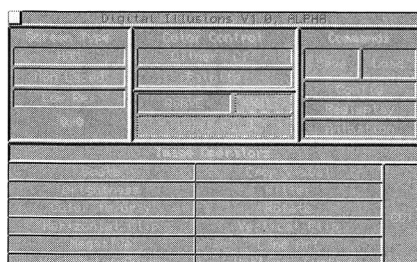
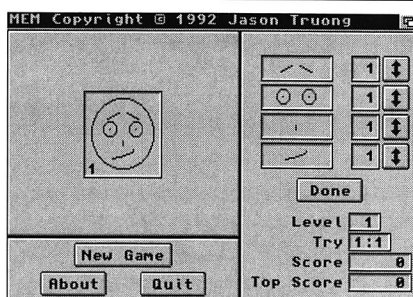
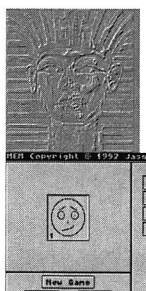


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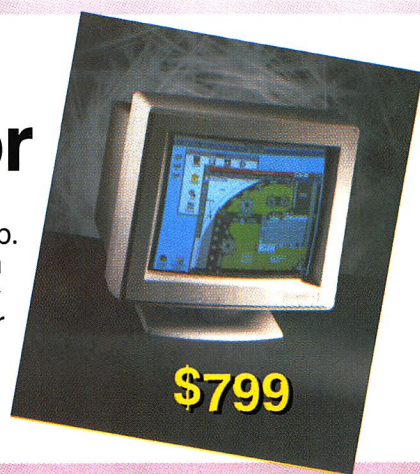
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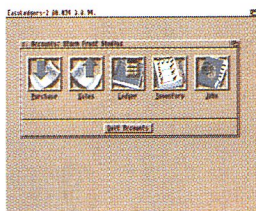
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Smooth, 24bit, full screen -

now you can have all three

By Patrick Kirsch

► Anyone who attended SMPTE in July could not help but notice the proliferation of digital video systems of various sorts. It seems that every stand had a disk recorder or non-linear editor of some kind on display. In fact, video tape recorders were remarkably scarce, and the few that were there were mostly digital formats like Ampex DCT or Sony's Digital Betacam.

The impression most visitors came away with was that the days of analogue video tape are numbered. It will be some years before tape is superseded as an image gathering or final distribution format, but the writing is on the wall for tape as an editing format. The future of desktop video is disk recording and playback.

For the Amiga, the choice is presently limited to three systems: MediaFlex, The Bandit and the DPS Personal Animation Recorder (I won't discuss the NewTek Flyer here, as it is NTSC only).

The MediaFlex system, developed by Perth's Colour Computer Systems, is a full non-linear editing system based around DMI's Digital Broadcaster 32 and Sunrize's Studio 16. It can also inter-

face to Opal Technology's soon to be released (we hope) Video Suite, to produce real time DVEs and transitions.

Although the software for MediaFlex was not yet fully functional at SMPTE, the quality and versatility of the system was immediately apparent.

The price, however, is prohibitive for most of us. The system must be built into a late model A4000 (Buster 11), with a Z3 Fastlane SCSI-II controller, a Seagate Barracuda SCSI-II hard drive (two gigabytes minimum, recommended), Sunrize AD516 audio card, and it is also advisable to add a display card such as a Retina and a 17" monitor.

Base price comes out to around \$25,000. Compared to other non-linear editors, such as Avid, Media 100, Imix Cube and so on, this is very competitive, and MediFlex should do very well in the established broadcast market. For people just pushing into the fringes of broadcast output, a cheaper alternative must be sought.

Fast Forward Video's The Bandit is a stand alone unit that connects to the SCSI port of an



Amiga, PC or Mac. The base model can play 23 seconds of video from its own RAM, or can be upgraded to disk playback of up to 30 minutes.

It includes a Time Code reader/generator and machine control for VTRs with RS422, RS232, VISCA, Control-L, Panasonic 5 pin and MIDI. It does not, however capture live video. A five minute playback unit will set you back around \$18,000; a price that still turns most bank managers into quivering mounds of jelly.

Finally we come to the DPS Personal Animation Recorder, or PAR as it is thankfully abbreviated. This device has been available for some time now in the USA in NTSC standard, and has sold well and received much praise.

The new PAL Amiga version was on display at SMPTE, and gained considerable attention from the largely Amiga-ignorant visitors. It might have drawn even bigger crowds if the unit on



display had had something on the hard drive that really showed its true potential. Be that as it may, the simple, elegant interface and the high output quality of the PAR, along with its price tag, had me reaching for the cheque book.

Installation

Once inserted into a free Zorro slot, a ribbon cable is used to connect the PAR to an IDE hard drive, which you must mount somewhere in your machine. Next, connect the composite video out of the card to a monitor. There are simultaneous Y/C and YUV outputs, which I connected to my SVHS and Betacam VTRs.

You can also connect a genlock input to the card if you need the output of the device to lock to the rest of your video gear. I found that the sync output of the PAR was a little unstable (occasional image jitters) until I provided it with blackburst.

The software installation uses the standard Commodore Installer. I ran the test program and it confirmed that my PAR was working and successfully talking to the hard drive, a Micropolis 4110 1.057 gigabyte.

I next had to format the hard drive, which was achieved within the PAR program itself and took only 5 seconds, after which I could begin converting images onto the PAR drive. I installed several test images (multiburst, colour bars and so on) and examined the output with vectorscope and waveform monitors. Everything was spot on and indicated a bandwidth of greater than 5.5MHz, correct burst and white levels and accurate chroma phase.

Software

The PAR interface screen is a little like a directory utility. Three large file list windows display,

from left to right, "projects" on the PAR drive (equivalent to AmigaDOS directories), files within the projects - either stills or animations, and finally AmigaDOS devices and drives from which images may be converted to the PAR drive.

The PAR drive talks directly to the PAR and not to AmigaDOS. However, when the PAR program is running (or iconified), the PAR drive becomes mounted in AmigaDOS as "DDR:", and can be accessed through the shell, or Quarterback for example.

It is thus possible to back up your PARanims and later restore a PARanim directly to the PAR drive. You can also have your rendering program save its output direct to the PAR drive, and the frames will automatically be converted to a PARanim as they roll off the renderer.

If, on the other hand, you choose to save your frames as IFF24s to an AmigaDOS device, you can then easily batch convert them to a PARanim by selecting them all in the AmigaDOS file window, and clicking "Import".

An automatic filter can be applied during conversion to help keep colours PAL legal. Conversion time varies depending on your processor power and image complexity, but on an A3000 about 30 seconds per frame is typical.

Magic tricks

It's during the conversion process that the first piece of PAR magic becomes evident. Before beginning conversion you must set two parameters: block limit and Q-factor. Block limit indicates the maximum number of 512 byte blocks that each animation frame can occupy on the hard drive. A setting of 200 will limit each frame to 102,400 bytes.

If your hard drive can maintain

a transfer rate of 2.5 MB/second, then this block limit will comfortably play at 25 frames per second without any glitches. A faster drive, such as the Micropolis 4110, can handle even larger block limits, and I have found 220-250 to be acceptable.

The block limit is crucial also to the mysteriously named Q-Factor, which is in reality the compression quality factor, ranging from 0 (barely watchable) to 23 (subjective broadcast quality).

When working with animation frames being converted to PARanims, one can leave to Q-factor set to 23 at all times - the PAR automatically adjusts the compression for each frame according to the complexity of the image and maintains the best quality image from one frame to the next.

This results in small file sizes with remarkably few compression artifacts.

The DPS PAR is not a non-linear editor, yet it has editing features that make it more than just a disk recorder. PARanims can be split, joined, duplicated, reversed, ping-ponged and looped, and frames may be appended to or deleted from them.

A one gigabyte drive can hold seven to 10 minutes of video - enough for a short presentation or a long music video. One drawback is that any segment must be a single PARanim in order to play back in one go.

The PARanim must be in contiguous space on the drive; a fragmented disk will cause serious glitches during playback. There is a "Cleanup" function to optimise the drive.

The last important feature of the PAR is its ability to lock its playback to SMPTE time code being read or generated by a Sunrize Studio 16 card (either the AD1012 or the AD516).

This feature genuinely amazed



me, as I wasn't even aware of it until I installed the unit and started reading the manual. To use this feature you must first run Studio 16. Then from the PAR screen click on the button marked "SMPTE". A requester asks for the starting timecode for the animation. You can set an arbitrary figure of, say, 15 seconds.

Click on the loop gadget on the VTR style controls, followed by pause and play, then jump to the Studio 16 screen. If you are using Studio 16 version 3.0, all the Cue List controls will also control the PAR.

Drag the position flag with your mouse and the PARanim will follow right along, no matter how fast or slow you drag it.

Stop at a particular event in the animation, say: a water droplet

lands in a sink full of water, drag your "drip" sound effect onto the Cue List, hit the play-from-start button and you can watch as your animation plays back at 25 frames per second, in true broadcast resolution, with a CD quality sound effect triggered at the precise frame where you want it.

I have unfortunately discovered that sound and vision don't always lock up frame accurately, but usually they do.

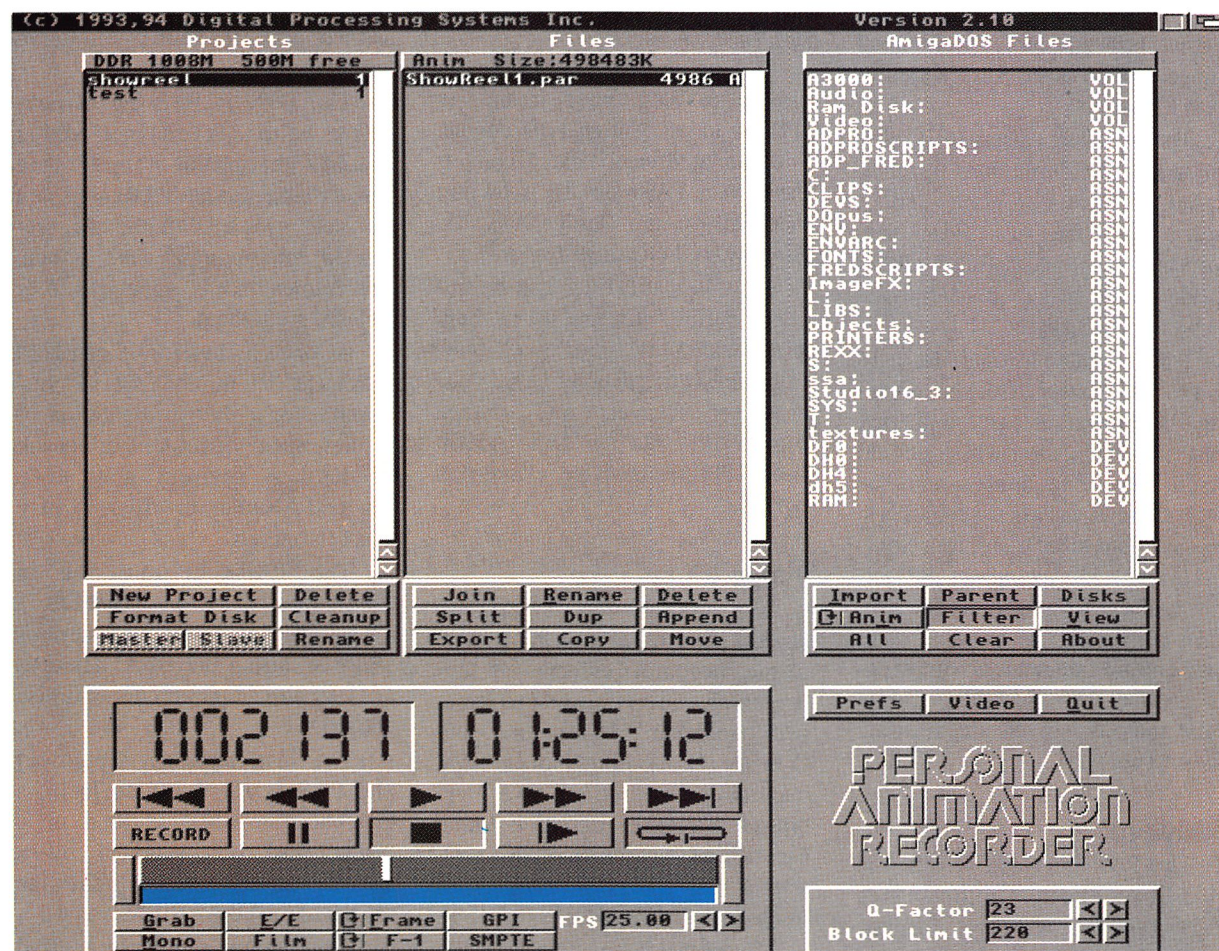
The Damage

So, finally, to price. OK, so at \$4400 this one Zorro card is going to cost you more than you probably paid for your computer. Add a one gig drive at \$1600 and the optional real time video capture card at \$2500 and you could buy a reasonably nice car.

I understand that the Vlab people will be releasing a "VHS quality" capture/playback device in the future at a lower cost than the PAR, and that DMI are concerned the PAR will take away from sales of the Digital Broadcaster and are preparing a playback only Digital Broadcaster priced to compete with the PAR, but at this stage they're both still vapourware.

If you want to get on the digital video bandwagon today, the PAR offers an amazing amount of features for very little cash, will work in even a vanilla A2000, and is available now, fully functional.

In future issues I will discuss more traditional ways of dealing with video and the Amiga.



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Dimensions: 17cm deep (extending behind the CD³²) x 15cm wide (about the width of the CD³² Expansion Port Connector) x slightly shorter than the CD³² in height.

Serial Connector: DB9 connector (this is different to the A1200), IBM AT compatible.

Disable Switch: Disables SX-1 functions of IDE, floppy drive, parallel and serial interface. It will not disable memory SIMM, RGB video, Keyboard translator, or audio input functions.

Parallel Connector: DB25 - A1200 compatible.

Video Connector: DB23 - Amiga 1200 compatible RGB port (does not have -5V present on connector), connector does have combined FMV and CD³² video data.

Floppy Connector: DB23 - A1200 compatible.

Realtime Clock: An internal RTC and replaceable battery (socketed Lithium Cell) is provided.

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1 x 44 pin internal connector - Amiga 1200 compatible and 1 x DB37 external connector. Room internally for a 2.5" Hard Disk Drive.

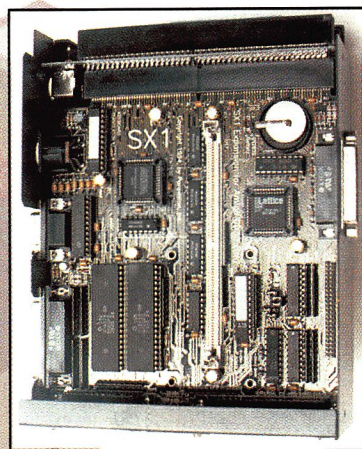
AT-101 Keyboard Connector:
5 pin DIN connector allowing the connection of a standard IBM 101 AT keyboard into the CD³².

Audio Input Connector: 6 pin mini-DIN style connector allowing the addition of a Karaoke microphone and control unit. This input will be mixed with the Amiga audio output and the CD player output.

Memory SIMM Connector: A single internal 72 pin SIMM socket is provided. You can install a 1, 2, 4 or 8 MB SIMM.

MPEG Passthrough: The SX-1 has a pass-through connector allowing installation of Commodore's FMV module. FMV module installation limits the SIMM memory to 4MB.

CD³² may require higher rated PSU in some configurations



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► Australia is a great place to live. Nice climate, beautiful scenery, low crime, reasonable cost of living, highly entertaining government. But describing it as handy to all the centres of Western society would be something of an exaggeration. The magic of the universally accepted credit card makes it quite easy to buy things from overseas, but not if you're dealing with one man operations that don't take cards - like any shareware author you care to name.

Thus have Australians converted considerable slabs of our dollars into greenbacks for sending overseas, or into more outlandish currencies for those authors who insist payment be rendered in their local money, be it cowrie shells or stone discs. Your money went away over the waves for many moons - and you'd often get a program back, eventually. No, really, you did. Occasionally somebody set himself up as a local representative for one or two programs, but organised this wasn't.

All this could change now that we've got the Australian Amiga Shareware Centre (AASC), a

Sydney based rego site for a lot of Amiga shareware already, with more to come. You send them the dough, in Australian dollars, and they IMMEDIATELY send you your registered copy - no waiting while they convert the money and send it off; they actually do their conversions in bulk, to cut down on overheads. The AASC is operated by Continental Drift BBS, sysop Andre Lackmann.

What've they got?

Here's a quick run down of the programs available.

DASModPlayer - \$25

A feature packed MOD file player, with random play, AREXX support, XPK-Packer support, author system and external player system, for support for almost any MOD format, APPIcon support and, naturally, more. DASMP uses the MagicUserInterface (MUI), meaning you can configure the interface to your liking.

MagicUserInterface - \$30

MagicUserInterface is a Workbench enhancer that lets programs written for it use a funkier inter-

face than Commodore intended. Because MUI applications don't contain any absolute values for sizes or positions, the programmer instead only defines objects and groups of objects. In English, this means you can, for example, resize MUI applications and have the buttons stretch or squash to fit the window. The freely distributable user half of MUI is on Fred Fish's AmigaLibDisk 966, with the developer portion (not necessary to use MUI programs) on 967.

MagicWB - \$30

MagicWB is the package of choice for Workbench narcissists. A hundred beautifully dithered eight colour icons, all of which have dual images (they look different when you click them). There are also 35 background patterns, nine attractive replacement fonts and a smart installer that doesn't stomp any of your existing icon positions or tooltypes.

Iconian - \$15

A high powered icon editor for any Workbench 2 or above system, this features 95 per cent of Icon Edit 3.0's abilities and also fully

resizable windows with custom font size support, palette control over 256 colours and locking of pens. You can do multiple undos, there's a beveled box drawing tool, font and text support, with outline, shadow, and beveled text.

Iconian can save icons with up to eight bitplanes, or force them to eight plane depth. You can cut and paste brushes with many operators and modes. There's remapping of Datatypes, with two types of optional scaling (thumbnails). Naturally, there's more. The freely distributable version's on Fish 991.

PicCon - \$25

Picture Converter is a utility for programmers, which will convert IFF ILBMs (or any format you've got support for in your datatypes library) to an appropriate image format.

This is an essential stage in the development of games, but is also useful in development of other software. Parts of pictures can be cut out to be saved individually, as sprites or small bitplanes. Fish 989 for the unregistered version.

HyperANSI - \$35

A fully-featured ANSI editor for designing BBS screens and the like. Features include cut and paste of blocks on screen, macro recording and playback, flood fills, transparency (similar to blue screening for animators) and full support of the IBM character set and ANSI color set. Fish 851 for the unregistered version.

RIPGraf - \$45

A RIPscrip (Remote Imaging Protocol) editor, for making the image files used by RIP bulletin board systems. Features include unlimited undo, line draw, continuous line draw, and filled and un-filled circles, ellipses, rectangles and polygons. Bezier

curves, RIP fonts, RIP Icons, RIP Buttons, and pattern fills.

MultiTool II V2.0 - \$20

A directory utility. Features font sensitive and resolution independent GUI, and locale support with OS2.1 and higher. LZH and LHA archives can be double clicked like directories, causing MTool to display the archive contents in the directory list.

Now you can copy files into and out of the archive, or delete them. MultiTool's got all the basic functions: copy, delete, calculating the size of subdirs as standard. Special features (showing pictures or anims, playing MODs) can be configured using external programs. Freely configurable tools menu. Needs OS2.0 and higher.

BackUP - \$30

A freely distributable, shareware hard drive backup program that features a custom Intuition interface, multi-floppy drive support, high-density drive support, incremental/full backups, on-the-fly compression, optional verify, two types of backup logs and a restorable configuration.

BackUP requires Workbench 2.x and lh.library V1 (supplied). Freely distributable version on Fish 884.

Solit - \$20

Freely-distributable, shareware non-Klondike solitaire card game for the Amiga under Workbench 2.x. Fish 882 for the unregistered version of v1.06; this is v1.11, slightly better.

Visual Arts - \$45

A new powerful GUI designer. Features include menu and list manager, Object Master, insert custom codes into any GadTools or GadTool Menu items, primitive drawing tools such as rectangle,

circle and lines; supports AppWindow and multi-processing windows. You can add AREXX to any program, custom images, custom images for buttons, popup menus, get any IFF colour map and use it in your program; there's a colour palette and over 40 custom patterns for fills.

Unlimited windows can be opened, supports PAL, NTSC, EURO, VGA, AGA screen modes, automatic history and timed saving, user configurable source output, and many more features. Visual Arts requires WB2.0+ and 512K CHIP, 1Mb recommended.

FileX - \$20

A binary file editor which offers public screen support (any dimensions), font sensitivity, Undo and Redo limited only by your free memory, search and replace, extensive block functions, clipboard support, ARExx port with more than 66 commands and command shell, printing as hex dump, and Grab Memory to show and modify memory.

If FileX runs on the Workbench, icons can be moved onto the FileX window and the related file will be loaded automatically (AppWindow).

DFA - \$30

An addressbook program. Features include flexible ARExx, multiple email addresses, auto-dialling, multi-format printing (labels, cards, lists), fully font sensitive, and support for WB3.0.

Phonebill - \$30

A comms program log file analyser. What it basically does is scan log file(s) generated by a terminal program or mailer, extract all information about calls you have made, and store this in its own (short) format. After extracting the calls, Phonebill can gener-



ate various reports in which you can find information on duration and costs of the calls.

Features include flexible user-configurable rates, user-configurable log scanners, and built in support for logs from AutoPilot, CyberPager, GPFax, JRComm, MagiCall, MicroDot, Multifax, NComm, Term, Terminus, TheAnswer, TKR-BTX, Trapdoor, Trapfax and UUCP TimeLog. Requires Kickstart 2.04 or higher.

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In the pipeline

The AASC is currently negotiating with Jack Radigan, author of the communications package Terminus, and also Stefan Boberg, elusive author of the compression

program LhA, to be the local rego sites for both programs. In the unlikely event that this is being read by an overseas shareware author that'd like an Australian site, the AASC is always interested in new offerings, and would like you to contact them. To reward you for reading this far, there's a special offer. The first three registrations received that mention this article will receive their registration free of charge. So get to it! □

How to contact AASC

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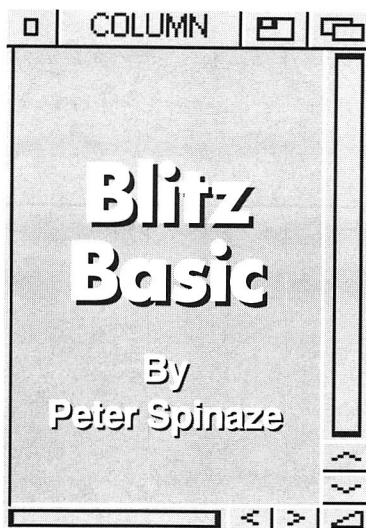
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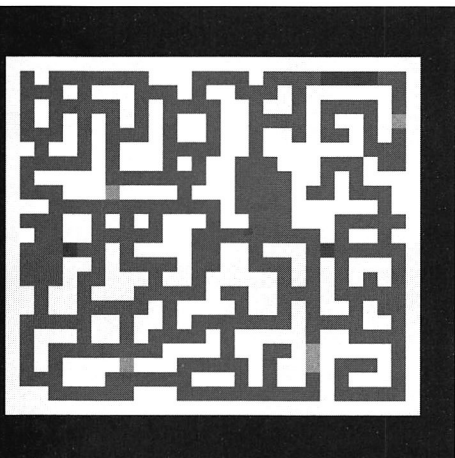


► Greetings Blitz users! This month I will be taking you through a tutorial in making your own maze games. Maze games are common, yet most beginner programmers seem to think they're too difficult to make.

Nothing could be further from the truth. Once you have a grasp on the basic principles, you'll be surprised at what you can do.

Most maze games are made from tiles. The first thing you need to do is devise a system to explain which tiles you can move on and which ones you can't - the walls.

One way to achieve this is by separating the ground and wall tiles into two groups. For example if your wall tiles are shapes numbered 1 to 100, and your floor tiles are numbered 101 to 200, then all you need to do is check which tile the player is trying to move to, and if it's greater than 100, you can move the player. Easy!



I have written a very simple game for you to type in to demonstrate some of the ideas. I have tried to keep it simple so you can see how it works. Don't worry too much about the nasties subroutine, just concentrate on the main loop to see how it works. You will first need to do some preparation in a paint program.

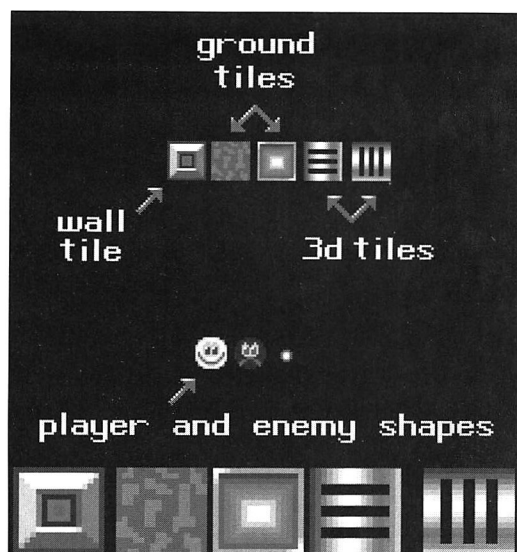
To begin with, open a 16 colour screen in Deluxe Paint. You will use this to design a few shapes for the game. You need to make 4 shapes, 16 pixels square for the tiles. The first one is a wall tile, the next one is a ground tile, number three is also a ground tile and number four will actually be displayed in front of the player to give a 3D effect.

If you use the background colour on this tile, those areas will show through. Once you have them drawn to your liking, save the image as "shapeiff", clear the screen and make three more shapes.

These will be the player and the enemy shapes. Draw a circle with a diameter of 13 pixels, and draw on a happy face. Do the same with the next shape but draw on an angry face. The last one only needs to be about 5 pixels in diameter and will be used as a bullet. Save it as "shapeiff2", and once again clear the screen.

This time you will draw the design of the maze you want. Each pixel of colour will represent a specific tile. This is a quick way of designing levels without having to write an entire level editor. The diagram shows the type of maze to make. The fewer dead ends and long straight corridors you make the harder the game will be.

Draw a rectangle 29 by 25 pixels. It needs to be in the first colour (excluding the background of course). Using colour 2, draw within the rectangle any areas that you can walk on. Make sure the

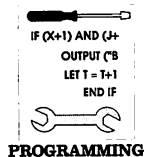


top left of the rectangle can be walked in, as this is where you begin when you start. Now use colour 3 and put a dot anywhere on colour 2 where you want an enemy to appear (make four of them).

Lastly, use colour 5 to put on any areas that will appear in front of the player. Now pick up the rectangle as a brush and place it in the far top left hand corner of the screen, making sure there isn't even one pixel between the rectangle and the corners of the screen.

Use the shape grabber to make the shapes. Save the shapes as "maptiles", for the tiles, and "shapes", for the players. Now you're ready to type in the program.

The idea of the game is to move your smiley around the maze to make contact with an angry face. The enemy will then turn into another smiley. However it isn't as easy as it sounds, as they run away from you and have a nasty habit of firing at you if you get too close. Trapping the nasties in dead ends is the best way to capture them. Once you have turned all the bad dudes into good guys you've finished.



```

BitMap 2,320,25,4
LoadBitMap 2,"df0:mapiff"
LoadShapes 0,"df0:maptiles"
LoadShapes 50,"df0:shapes"
LoadPalette 0,"df0:shapeiff"
VWait 60

BLITZ
#xsize=28:#ysize=24:#enemy=4 ; #enemy = the number of nasties
DisplayOff:Dim n(10,#enemy):lives=3
Buffer 0,16384:Buffer 1,16384
Slice 0,44,256,200,$fff8,4,8,32,464,464
BitMap 0,464,400,4:BitMap 1,464,400,4
Use Palette 0:Use BitMap 2
Dim map(#xsize,#ysize)
For y=0 To #ysize ; draw up the screen
For x=0 To #xsize
map(x,y)=Point (x,y)-1 ; make map array
Use BitMap 0:Block map(x,y),x*16,y*16:Use BitMap 2 ; draw tiles
If map(x,y)=2
t+1:n(1,t)=x*16:n(2,t)=y*16:n(5,t)=51 ; set positions of enemy
End If
Next
Next
Free BitMap 2:x=16:y=16
CopyBitMap 0,1:DisplayOn

mainloop:
VWait:Show db,xscr,yscr:db=1-db:Use BitMap db:UnBuffer db ; double buffering
jy=Joyy(1):jx=Joyx(1) ; check joystick
If jy=1
If map(x/16,(y+13)/16)>0 AND map((x+12)/16,(y+13)/16)>0 Then y+1
End If
If jy=-1 ; check map
If map(x/16,(y-1)/16)>0 AND map((x+12)/16,(y-1)/16)>0 Then y-1
End If
If jx=1
If map((x+13)/16,y/16)>0 AND map((x+13)/16,(y+12)/16)>0 Then x+1
End If
If jx=-1
If map((x-1)/16,y/16)>0 AND map((x-1)/16,(y+12)/16)>0 Then x-1
End If

BBlit db,50,x,y
mx=Int(x/16):my=Int(y/16)
If map(mx,my)>2 Then Blit map(mx,my),mx*16,my*16 ; draw 3D tiles
If map(mx+1,my)>2 Then Blit map(mx+1,my),(mx+1)*16,my*16
If map(mx,my+1)>2 Then Blit map(mx,my+1),mx*16,(my+1)*16
xscr=QLimit(x-150,0,208) ; limit screen scrolling
yscr=QLimit(y-100,0,200)
Gosub nasties
Goto mainloop

nasties:

```



```

counter+1
For i=1 To t
If n(5,i)=51
n(1,i)+n(3,i):n(2,i)+n(4,i)           ; update enemy positions
If counter=16                         ; check map every 16 loops
n(3,i)=0:n(4,i)=0
If x>n(1,i) AND map(n(1,i)/16-1,n(2,i)/16)>0 Then n(3,i)=-1:n(4,i)=0
If x<n(1,i)+1 AND map(n(1,i)/16+1,n(2,i)/16)>0 Then n(3,i)=1:n(4,i)=0
If y>n(2,i) AND map(n(1,i)/16,n(2,i)/16-1)>0 Then n(3,i)=0:n(4,i)=-1
If y<n(2,i)+1 AND map(n(1,i)/16,n(2,i)/16+1)>0 Then n(3,i)=0:n(4,i)=1
If RectsHit(x-40,y-40,80,80,n(1,i)-40,n(2,i)-40,80,80)
If n(6,i)=0
n(6,i)=1:n(7,i)=n(1,i)+4:n(8,i)=n(2,i)+4      ; make a bullet
n(9,i)=0:n(10,i)=0
If x>n(7,i)+8 Then n(9,i)=1:Goto f              ; set direction for bullet
If x<n(7,i)-8 Then n(9,i)=-1:Goto f
If y>n(8,i)+8 Then n(10,i)=1
If y<n(8,i)-8 Then n(10,i)=-1
End If
End If
End If
f:
If n(6,i)=1                                     ; move and check bullets
n(7,i)+n(9,i):n(8,i)+n(10,i)
If map(n(7,i)/16,n(8,i)/16)<1 Then n(6,i)=0
If ShapesHit(52,n(7,i),n(8,i),50,x,y)
x=16:y=16:lives-1:If lives=0 Then FadeOut 0,1:End
End If
BBlit db,52,n(7,i),n(8,i)
End If
End If
If ShapesHit (51,n(1,i),n(2,i),50,x,y) Then n(5,i)=50 ; turn enemy into goodie
BBlit db,n(5,i),n(1,i),n(2,i)
If n(5,i)=50 Then f+1
If f=#enemy                                     ; has the player finished?
For j=1 To 15:RGB 0,j,j,j:VWait:Next:End
End If
Next i
f=0:If counter=16 Then counter=0
Return

```

The method is simple. If you move the joystick right, check the tile to the right of the player; if it's a ground tile then move the player right.

The 3D tiles are achieved by checking to see if the player is standing on one. If so, then draw the tile AFTER the player to make it appear that your player is moving under it. You'll notice that when moving the player you make

two checks instead of one to determine if he can move in that direction. This is because your shape has width and height. So if you check if the player can move down, you have to check both the left and right sides of the smiley.

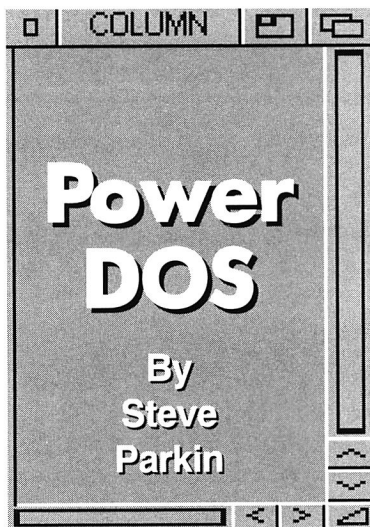
That's all there is to it. You can expand this game into anything you like. How about making your player animate in each direction? Or maybe making a map editor for

designing levels? The possibilities are endless. I hope this tutorial has been of some help. I can be contacted on the below address if you need some help or additional information.

*Peter Spinaze, 29 Wilguy Crescent,
BUDERIM 4556.*

Keep on Blitzing!





Understanding Environment Variables

Let's get to business. The purpose of this column is to explain some DOS functions and also show you a few nice little tricks you can use at home on your own Amiga. I'll primarily be covering things like environment variables (EV's), scripts, and aliases.

Many of you probably use scripts in some way or another in your system's setup, so let's look at a few useful things you can do that may make things easier for you. I'm assuming you have at least WB2.x in this column, WB1.x owners, here's yet another reason to upgrade! Note that lines preceded by "1> " mean you can enter them on the command line.

Execute and .KEY, .DEF, .BRA, .KET, .DOLLAR, .DOT

Many people don't understand the parameters you can give to scripts. When I saw my first script file using the .KEY option, I had no idea what it was doing, so true to form I took the script apart and decided there'd be a use for it somewhere. When you run a script, DOS looks for a couple of keywords. These are:

.KEY [var]([, [var]), ...)

Sets the variable names used by the script. This command must

be the FIRST LINE in the script. EG: .KEY diskname, dir, file

Each variable name must be terminated by a comma if there are other variables to follow. When the variables are used in the script, they must be enclosed in '<' and '>' EG: <diskname> or <dir> or <file> <diskname>: <dir>/<file> will also work, but you cannot specify a ':' in diskname, or a '/' in dirname.

.DEF [var] [value]

Used to specify a default value for a variable. This can be anywhere in the script, but for tidiness, it's easiest to leave it at the start of the file. Obviously the values here will be used as default, but if another value is given by the user, then that will be used instead.

EG: .DEF diskname MyDisk

.DEF dir MyDir

.DEF file MyFile

Another way to specify a default value is including a dollar sign (\$) in the brackets surrounding the variable thus:

.KEY diskname

CD <diskname\$df0>:

This way, the default value for mydisk will be 'DF0'. Both are easy to use, but I prefer using .DEF for ease of understanding what the script does when you look at it in 6 months.

.DOLLAR [char]

The .DOLLAR keyword shows which character should be used instead of the '\$' symbol when setting a default. In other words, if we used

.KEY diskname

.DOLLAR #

CD <diskname#df0>:

it would work exactly as in the previous example, but there'd be a little more typing to do when setting the script up.

.BRA [char]

.KET [char]

.BRA and .KET are very closely related. As in .DOLLAR, they replace the '<' and '>' symbols, eg:

.KEY diskname

.DOLLAR #

.BRA {

.KET }

CD {diskname#df0}:

would still work!

.DOT [char]

The .DOT command works as in .DOLLAR, .BRA, .KET except tells DOS that you're going to use something other than the full stop to denote commands.

.KEY diskname

.DOT !

!DOLLAR #

!BRA {

!KET }

CD {diskname#df0}:

There's quite a few ways to work these things into your scripts, aren't there? Now all we need's a practical use and we've got something wonderful.

The most useful thing I've found is a relatively simple way to implement the PCD function found in the S: directory of your workbench disks. Imagine you had a script called (imaginatively) KeepPrevCD and it was filled with the following bytes:


```
-- WB2+
-- Stores previous in EV "CD"
.key directory ; Set up the variable
CD >Env:CD ; Store the old path
CD <directory> ; CD to the
requested directory
```

and a second script called Goto-PrevCD which went along these lines:

```
; Returns to last directory
CD $CD ; CD to the directory
stored in env variable "CD"
-- EOF
```

It looks a lot simpler than Commodore's PCD function.

Even easier is be to use a nice simple alias thus:

```
ALIAS GotoPrevCD CD $CD
```

Aliases are best kept in the file S:Shell-Startup so that they are installed on every shell you open.

Environment Variables

Environment variables are stored in the directory to which ENV: is assigned. Generally this is RAM:ENV/, but if you like having a slightly different system setup, ENV: can be put nearly anywhere. They are accessed by preceding their name with a dollar sign (\$). All that aside, what are they and what can they do for you?

There's two ways to create an EV. First way is with DOS's trusty 'SETENV' command, eg:

```
1> SETENV MyDisk DF0:
1> CD $MyDisk
```

will work. The other way I've already touched upon is by redirecting the output of another file to where the EV would be stored:

```
1> ECHO >ENV:MyDisk "DF0:"
```

```
1> CD $MyDisk
```

Both of these examples will work, as an EV is only the string specified put into a file. For example if you were in the directory "DF0:Samples/" and typed

```
1> CD >ENV:Dir
```

and then entered

```
1> ECHO $Dir
```

Your trusty Amy would state

```
DF0:Samples
```

This is all very nice, isn't it, but what can it do for you? How does giving you the ability to run any of your major (or minor!) programs from anywhere in the Shell sound? I have a similar system to the one I am about to show you stored in an assign of 'SCRIPTS:' which is in my PATH statement.

Just say you wanted to load Delitracker from the CLI. There's nothing stopping you setting up two scripts to do it for you, but why use two scripts when one simple script will work? You can use a different setup script for each application:

```
SetEnv Stack 4000
SetEnv Path DH1:Trackers
SetEnv Prog DeliTracker
SetEnv Text Loading DeliTracker.
Execute SCRIPTS:EnvLoad
```

The four setenv statements aren't very exciting on their own, are they? But what's the ENVLOAD script, I hear you ask? Here it is:

```
-- ENVLOAD script
Echo >>T:EnvLoad.Log "Loaded
$Path $Prog on: " NOLINE
```

```
Date >>T:EnvLoad.Log
Echo >>T:EnvLoad.Log
"-----"
Stack $Stack
CD >ENV:CD
CD $Path
Echo " *n*e[0;1;32;43m "
NOLINE
Echo $Text NOLINE
Echo " *e[0m*n"
$Prog
CD $CD
```

When you execute the Delitracker script, it sets a few EVs then runs the ENVLOAD script which will interpret it all, log the file loaded, then load Delitracker and display a standardised message saying what it's loading. Line by line, with the inserted variables enclosed in curly brackets {}:

```
Echo >>T:ENVLOAD.Log
"Loaded {DH1:Trackers}
{Delitracker} on: "
```

The >>T:Envload.log part will append the line to the file. If only one > is used, it will replace the file instead of appending to it.

Date >>T:Envload.log will append the full date to the logfile,

```
Echo >>T:Envload.log
"-----"
will add a spacer to the file so you
can read it easily.
```

```
Stack {4000} ; Some
programs require larger stacks.
CD >ENV:CD ; Store the
current CD in an EV.
```

```
CD {DH1:Trackers} ; CD to the
required dir to run the file
Echo " *n*e[0;1;32;43m "
NOLINE ; Make the text white,
bold and the color windows are
; when active.
```

```
Echo {Loading Delitracker.} ;
Display a message saying what's
happening
Echo " *e[0m*n" ; Return to
```


black on grey text

{Delitracker} ; Command used to run the program. There's no reason why it can't be "Runback Delitracker"

CD {previous directory} ; Return back to the directory we were in before we ran the Delitracker script

With all of the knowledge you've gained this far, it should be easy for you to alter the EnvLoad system for optional logging of operations (hint: use .KEY and .DEF in the Delitracker script and have a default of >NIL: instead of >>t:envload.log); it's not that hard, honestly!

Aliases

Aliases are pretty simple, after all, their usage is simply

1> ALIAS [name,string/F]

the [] brackets are used to specify parameters provided by the user.

A nice simple one would be

1> ALIAS LQ List [] Quick

Then typing LQ will list the directory you're in in quick format (no sizes, just filenames) and LQ sys: will be expanded to

1> List SYS: quick

There's the old ones like

Alias t type []

Alias v c:Fullview []

Alias g amigaguide [].guide

And even if you're willing to spend some time setting up help-

files, you can get them easily displayed with

Alias help Type s:Help_[]

then typing help scripts will display the file s:help_scripts to the current shell.

There's not really much more to tell you about aliases, the best way for you to find uses for them is by testing various things. The first alias I used was simply

ALIAS Print RUN Copy to PRT:
[] Clone

Then typing Print S:Startup-sequence will dump it to the printer. This will only work with straight ASCII files - dumping a word processor document (eg: Final Copy) to the printer won't work!

Hope this is all of use to you out there, and make sure you keep your Shell happy!

□

Data Transfer

Moving files from MS-DOS machines to Amigas is easier than it used to be, but it's still not child's play.

With CrossDOS bundled with Workbench, most Workbench 2 and above machines can deal with 720k IBM 3.5 inch disks by simply setting up PC0: or PC1: as described in the manual - you can now format IBM disks and move files freely. So shifting files under 720k is trivial.

What if you need to move something bigger? Well, archiving will keep you out of trouble with files a fair bit larger; LZH archives are a good dual platform standard since both machines can make and extract them. ARJ and ZIP are more popular archive formats on the PC, but Amigas only have an extractor for ARJ.

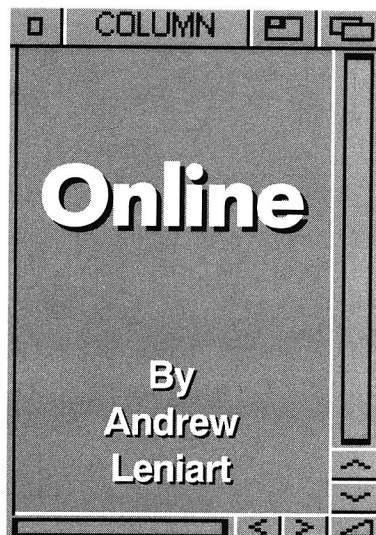
There's an Amiga ZIP, but not many people have it; usually they've only got unZIP. A high density Amiga drive doubles your size limit, but these are still rather expensive. And what do you do with huge files - 10Mb 24 bit images, for example?

If you happen to have lots of spare time and patience, and free phone support from a guru, you can set up a Syquest or other removable drive for cross-platform mounting, so you can either have a Syquest drive on each machine and move the cartridges or carry the whole drive around.

This is very painful, and removable drives aren't cheap, and you'll need a SCSI controller in the PC. You can use modems or a datalink cable, but this is slow, modems also cost money, and datalinked machines need to be adjacent.

Or you can split and join files, putting the pieces on separate floppies. There are several freely distributable split and join programs, at least one of which comes with PC versions. Call your local PD library or, for faster service, BBS, to find the one right for you.

Another solution is to use PCRestore, on Fish disk 920. This takes disks created by MS-DOS's Backup from DOS v3.3 to 5, and restores to the Amiga. Doesn't work with later DOSes, though, and doesn't work the other way.



Frozen Fish-PC

► I was sitting here, minding my own business just before the August issue of ACAR was to be sent to the printers, when I got grabbed, gagged and mercilessly dragged down into the basement by Daniel Rutter's thugs. I put up an admirable struggle, but the goons had the element of surprise and outnumbered me five to one! [Yeah, right. Admit it Andy, you followed a trail of Smarties. DR]

All that, just so he could steal my few pages of space to promote the AmiNet CD-ROM. I'm back with a vengeance this month, and would like to bring attention to something about the excellent value Aminet CD which Daniel forgot to mention.

The AmiNet CD is designed so that it can be used on a BBS. Its contents consist mostly of archives. The problem I see with it, though, is that many BBS systems will simply not be able to use it. This is because the filename formats have not been kept to the 8.3 limit and the disc is loaded with .info files and long file names, which will break many BBS systems running under MS-DOS. In short, it's not ISO-9660 Level 1 compliant.

I've always maintained that "BBS ready" CD-ROMs should be constructed so that the majority of BBS systems can make use of them. This ensures that as many people as possible can benefit from them. Sadly, there are very

few around and I continue to be surprised at BBS ready CD producers for not making any effort to cater for most Amiga supporting BBS systems.

With a little more time spent to simply shorten archive names to an 8.3 format, what is effectively achieved is that all of a sudden hundreds if not thousands of Amiga supporting systems all over the world can make use of the same CD and make its contents available to all of their callers. To me, this makes a lot more sense, and bulletin boards running on Amigas can still take full advantage of the same CD.

Fred Fish to the rescue

A few issues back, I mentioned that I would be contacting Fred Fish regarding his BBS ready CD-ROMs and getting his feelings on making FrozenFish CDs available in a format which was palatable to PCs. I did that, and can report that, not surprisingly, many other BBS operators had beaten me to it.

Fred advised me that the FrozenFish-PC CD-ROM was already near completion, due to the many requests which he had received for such a CD. Here is some of what Fred had to say:

"By special request from BBS operators, I will be issuing a limited number of a custom version of the April 1994 FrozenFish CD, updated with some new material and called "FrozenFish-PC". This CD will have the complete contents of each floppy disk 1-1000 in individual archives and all directory and file names will be ISO-9660 level 1 compliant. This means that the CD will be completely compatible with IBM-PC based systems, unlike my regular Amiga CDs which are closer to ISO-9660 Level 2.

"Until the actual demand is known, each copy of this CD will

be individually created as a CD-R "gold disc", which is completely compatible with mass production CDs and CD-ROM drives. If there is sufficient demand for the CD, then there will be a small production run made and people who received the CD-R versions can upgrade to the production version for \$5 plus shipping costs. The price of the CD will be \$US24.95 for either version, because of the expected lower volumes and thus higher production costs per CD."

The last part of the above paragraph seems like a pretty good incentive for Australian CD distributors to pre-order these CDs and establish a demand, thus bringing the prices down for everyone.

Fred sent me a first-batch copy of the CD for review, and here's what you can expect to find on it, as well as some shortcomings I found.

Construction

The CD construction is simple. There are 28 directories on the disc which contain archived material totalling over 630 megabytes of files, usable on any BBS that supports the Files.BBS description format. I don't personally know of any BBS software that can't make use of a Files.BBS description file.

Every Fish disk from 1 to 1000 is on the CD, along with approximately 200 Mb of other material.

There are ten directories devoted to the 1-1000 floppy disk library, and another 18 directories containing the material not previously released. There is, however, a small amount of overlap with material released on previous Fish CDs.

Contents

Each directory contains its own Files.BBS description file, along with a Product info file which



contains useful information about each archive. These info files are useful for Database programs such as KingFisher 2.0 and other similar tools.

Happily, there are no files on the CD which have names longer than the 8.3 format required by PCs. This also means that there are no .info (icon) files, but it is still possible to easily view the entire contents from WorkBench on any Amiga running under WB2 by simply using the "Show - All files" option from the "Window" menu.

Apart from the 1-1000 Fish disks, other material includes database and business related software, developers' tools, comms software, programming, disk utilities, Amiga specific text, games, graphics, animations, Workbench 2 specific files, various other Amiga utilities and more. Great stuff!

Problems

As this was Fred Fish's first attempt at creating a CD-ROM palatable to PCs, it's understandable that there may be some imperfections. I found two.

The Files.BBS files contained on the CD had traditional Amiga linefeeds at the end of the description lines rather than the PC carriage return/linefeed combination. This broke the importing software on my Remote Access (RA) BBS and it refused to import the descriptions correctly into RA's database.

This fix to this was to simply copy the files.bbs files over to my hard disk and edit them.

The other problem I found was that there were four files in the CD's utility directory which were named incorrectly in the Files.BBS file. This is easily overcome with RA, but may not be on BBS systems that use the Files.BBS file directly from the CD.

I've reported both of the above problems to Fred and he has assured me that they are now fixed.

Features lacking

I was disappointed at the Contents.Txt file included in the root directory of the CD-ROM. It's a single text file that totals a huge 497,536 bytes. The file is automatically generated by Fred's software from the Product info files in each sub directory on the CD.

The Contents.txt file's purpose is to provide some type of index as to where certain files (excluding the disk archives) can be found on the CD and give a brief description of what they are. While an index file can be very useful, this one isn't in its present form.

I personally would have preferred to have a separate contents file reflecting each of the 18 subdirectories which contained the descriptions of material not previously released, rather than have the lot in one single file. This boils down to a personal preference however, so you may not agree.

I spoke with Fred about this and he pretty much agreed, saying that future releases will have an index file in each directory as well. That should keep everyone happy.

Conclusion

As a BBS operator that has hunted far and wide looking for an Amiga BBS CD which is fully accessible on my PC based BBS system, I found the FrozenFish-PC CD to be just what the doctor ordered. I'm confident that you will too.

Despite the couple of hiccups with the first release, FrozenFish-PC is now running perfectly on my BBS and, overall, I'm very pleased with it.

Given the response that I've been getting to ideas submitted to

Fred Fish, I feel sure that it will only improve in future versions. I'll pass on any additional information on Fred's CDs as soon as it comes to light.

Andrew Leniart can be contacted directly via modem at his own BBS, Andy's Attic, on (03) 7494897. Fidonet 3:633/106, Amiganet 41:300/106, Internet aleniart@insane.apana.org.au on the Internet.

FrozenFish-PC CD ROM Information

Review copy supplied by:
Amiga Library Services
610 N. Alma School Road,
Suite 18
Chandler, AZ 85224-3687
U.S.A Phone/Fax:(602) 917-0917
Recommended Retail Price:
\$24.95 US Dollars.

Internet on the cheap!

Quite a bit has been written lately on the subject of the Internet and various ways of how you can access it. The trouble is that many places that offer "real time" access seem to charge like wounded bulls. Don't be suckered in.

Be selective before you shell out big dollars; look around first for similar access being provided by hobby systems. The savings can be substantial amount.

I've recently discovered a system here in Victoria which has been running for almost two years and offers REAL TIME Internet access for the unbelievably cheap price of \$75.00 a year! Here's what you get:

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system in the world. You can grab files from these systems for the price of a local call.

TELNET, which lets you connect to any Internet system for the price of a local call, just as if you dialled it yourself from home with your terminal.

IRC, which allows you to chat, play games and exchange files with people all over the world in real time. WARNING - IRC is addictive! You've been warned.

EMAIL - Send a message to someone else also with Internet access on the other side of the world and have it arrive in their mail box about 30 seconds later! Likewise, others can send you email from anywhere and it appears in your mail box just as quickly.

The system's name is Insane

Internet. It's run by Stuart Marburg and Richard Preen, who are in it in the interests of providing a service, rather than making big profits. They do a great job too.

Insane at time of writing has 12 lines for you to dial in on. There are seven high speed 14.4k modems which you dial (03) 886-1230 to connect to and five 2400 modems for lower speed callers that can be dialed in on (03) 886-1190.

However, by the time you read this, Stuart tells me that he will have upgraded his system to 19 lines - 12 of which will be 14.4 with the other 7 remaining at 2400. This will make it even easier to get on the system for your daily fix of Internet.

Contact Insane Internet on either of the above modem numbers,

or give Stuart a call on his mobile phone on 015-357-008 for additional information. I've been a member of Insane for a couple of months now, and am very pleased with what I've gotten for my investment. I think you will be too.

Concluding

In future issues, Online will be going into the topic of Internet access for beginners in much more depth and will try and explain in plain English exactly what benefits you as a modem user can glean from it, along with the different types of access you can have.

I'll also be looking at find other systems, like DIALix, which offer Internet access for the rest of Australia's states at a reasonable price.



Continued on page 20 . . .

You can reduce the system overhead by changing the Tabby program's priority - if you set the priority down, other system processes will take precedence, but they'll also cause jerky performance from the Tabby as its input stream gets overruled by other processes.

On faster machines you can crank the Tabby's priority up for smoother operation. You can also change the refresh delay, which controls how many messages sent by the Tabby actually get listened to. This has the effect of reducing the data flow - if you set the refresh delay to 4, there's a quarter of the slowdown, but an equivalent loss of accuracy. A fast circle will now have a quarter as many points in it, and hence more corners.

You can also change the way that the mouse is positioned. There are five possible settings for this option. Slow filtered takes the average of the last position and the

current position, and changes the pointer position if the average differs from the position by more than a preset threshold value or if the position has changed slightly after staying in that position for a length of time.

Fall to point moves the pointer at a constant acceleration towards the new position. Stretch to point simulates the mouse being moved by a spring to the new position. And fast filtered is like slow filtered, but without the average bit. You can also use Direct, which moves the cursor directly to the new position, with no filtering at all. This can result in a lot of jittering, especially if you use a low refresh delay - you get to see every little error, as the pointer does a cheerful fandango all over the screen.

Overall

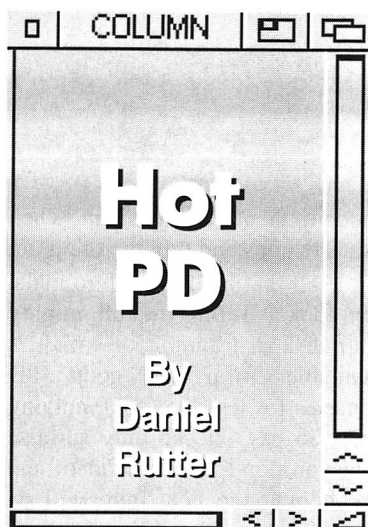
The Tabby is not as good as a big, trans-thousand dollar tablet - but you wouldn't expect it to be. As a mouse replacement for Work-

bench operations, it's pretty pointless. But for working with paint programs, especially things like 24 bit paint programs where you make a lot of pen-like gestures, the Tabby could work well once you're used to it. For precise pixel accuracy it's not too hot - you'll have to use magnification or switch to the mouse or you'll go nuts. And if you want to sign your name you'll need a brutally fast computer; the Tabby's serial interface means it will always be slower in response than a mouse, though not so's you'd notice on a fast machine. If you've got a 68000 based computer, consider an accelerator first.

In general, for \$200 the Tabby's an attractive prospect for Amiga artists. It started out on the IBM, and you can get drivers for IBM compatible machines, so if you've got both you could get double duty out of it. Worth trying out.

Available from Amadeus on (02) 652 2712. \$199.





► Welcome all to another installment of Hot PD, this month covering fewer individual programs than usual, but they're all goodies.

As I write, 500cc Formula 1 BBS, one of my favourites, is changing its operating software and should become still funkier, in both its conventional and Remote Imaging Protocol (RIP) incarnations. I like 500cc a lot - it gets scads of Amiga files and every FidoNet echo worth bothering with, and it's got enough lines that you've got a sporting chance of getting through, even when it's not a school day. By the time you read this it will be well and truly out of its current partially constructed state; if you're modem-equipped, give it a ring on (02) 550 4317. Advertisement ends.

*** KingFisher 2.1

Now that Fred Fish has hit disk 1000 and won't be releasing floppy Fish disks any more, it's time to shake up the Fish database programs. There's really only one worth bothering with these days - KingFisher - and it's seen a drastic update, which allows it to deal with the new CD-ROM distribution as well as the old floppies. Finally, good old Aquarium can have the stake pounded through its heart and be laid to rest forever - if you don't have KingFisher, get it or you won't be able to update your database.

The interface looks quite different - it no longer opens by

default on its distinctive patterned screen, but on the Workbench or whatever's your default public screen. More experienced Amiga users will realise that anything that likes to deal with public screens is probably Workbench 2 or higher only, and so it is with Kingfisher - if you've got 1.x, use the old v1.4.

You can still do searches for simple titles or description words, or logical combinations, but there's considerably more, now. The interface has been tweaked, with separate Fish Selection and Search gadgets instead of the colour-change kludge used before; you can also use a more powerful, but more complex, expression language for searches if you like. Instead of the old six-slot search word section, there's now a continuous history of what you've searched for. And you can change the way data's displayed, juggling the layout and which fields (see below) are displayed where.

Data importing's quite different, as it had to be since the program now has to be able to grab data from more than simple contents files.

KingFisher's author, Udo Schuermann, worked with Fred Fish in the design of the Product-Info Specification v6, which allows information in the database to be broken up into a large number of distinct fields, each of which has a specific meaning and can be examined individually. This makes the system more flexible; you can search for software by a specific author, for programs that have at least reached version 2, or software that is not commercial or been released after a certain date.

There's now an ARexx interface with the same formatting and search capabilities, which means automation freaks can hook KingFisher and its mounds of data up to any other application that uses ARexx, like, for example, a bullet-

“Four programs everyone should have!”

in board system. No more irritating halfbaked online Fish searches - with dedication, a board's entire file base could be integrated into KingFisher, vastly reducing search time and reducing errors and redundancy, the bugbears of big BB-Ses. Multiuser searching of different bases may not be of much interest to home users, but being able to tie search operations to buttons in your directory utility could be cool.

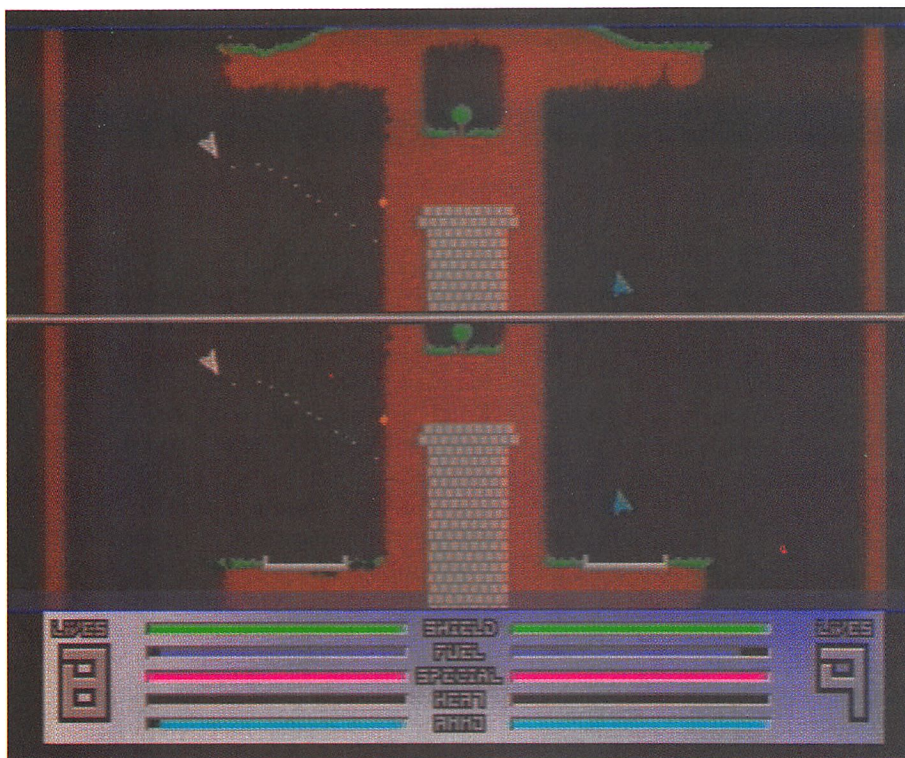
There's more I could say, but a) there's not enough room and b) game players will send me hate mail. For \$US20 registration (no crippling of the freely distributable version, by the way), KingFisher's remarkable. You can get it from all good PD libraries.

*** Term 4

On the subject of feature-fests, here's the latest version of Term, the huge free communications package. Term used to be updated every ten minutes, thanks to the enthusiasm of Olaf Barthel, the author, and the considerable number of digital arthropods that inhabited the code. Things have settled down, now, and you can

Program complexity guide:

- * **Moe or Barney could hack this.**
- ** **Bart wouldn't have a problem, Homer might.**
- *** **Marge or Mayor Quimby could nut it out.**
- **** **Lisa, Martin or Montgomery Burns only.**



draw several breaths before seeing a new version - though I just know I'm going to get v4.1 before this goes to press.

Term is more complex than most people need, but the complexity doesn't jump up and bite you; you can use it without ever touching most of the gubbins, but it's nice to know it's all there. This new version removes quite a few more bugs and adds an absolutely brain-shattering number of new features - there are 158 changes in total!

The less tedious new things include better memory handling, reducing fragmentation; better phonebook handling; RING and CONNECT messages from the modem are piped into the log file properly; the interface has been reshuffled for greater efficiency (file transfers look considerably better, with three different abort buttons for single files, batches and emergency drop everything mode); no more shooting in the dark for the right way to type the

name of your serial device or transfer library - just type the name with any old capitalisation and Term figures it out for you and opens the device/library with the correct name; call cost calculation now notices what locale you're using and sets the currency appropriately (small, but nifty); sound effects for events can now be compressed and/or stereo, and there's a global volume slider; you can set dial retries to 1,000, or infinity, if you like; there's auto-chopping of long filenames for transfer to PC systems; coprocessing of various windows so they don't stop you using the rest of Term with them open; there's a login learn mode just like some other terminals that will record what you do when you log into a BBS and can then replay it automatically in the future; and Term also now checks when you run it to see if the modem's on, and only tries to send the initialisation string if it is. No more terminal yelling at a dead

modem then staying silent when you say oops and turn the thing on.

If all that isn't enough to make you look at Term - the full, mighty four disk distribution of which is available from all good PD libraries for less than \$20, nothing more to pay - I can only surmise that you don't have a modem and are hoping the next item will be about a game. Oh, all right.

* Gravity Force 2

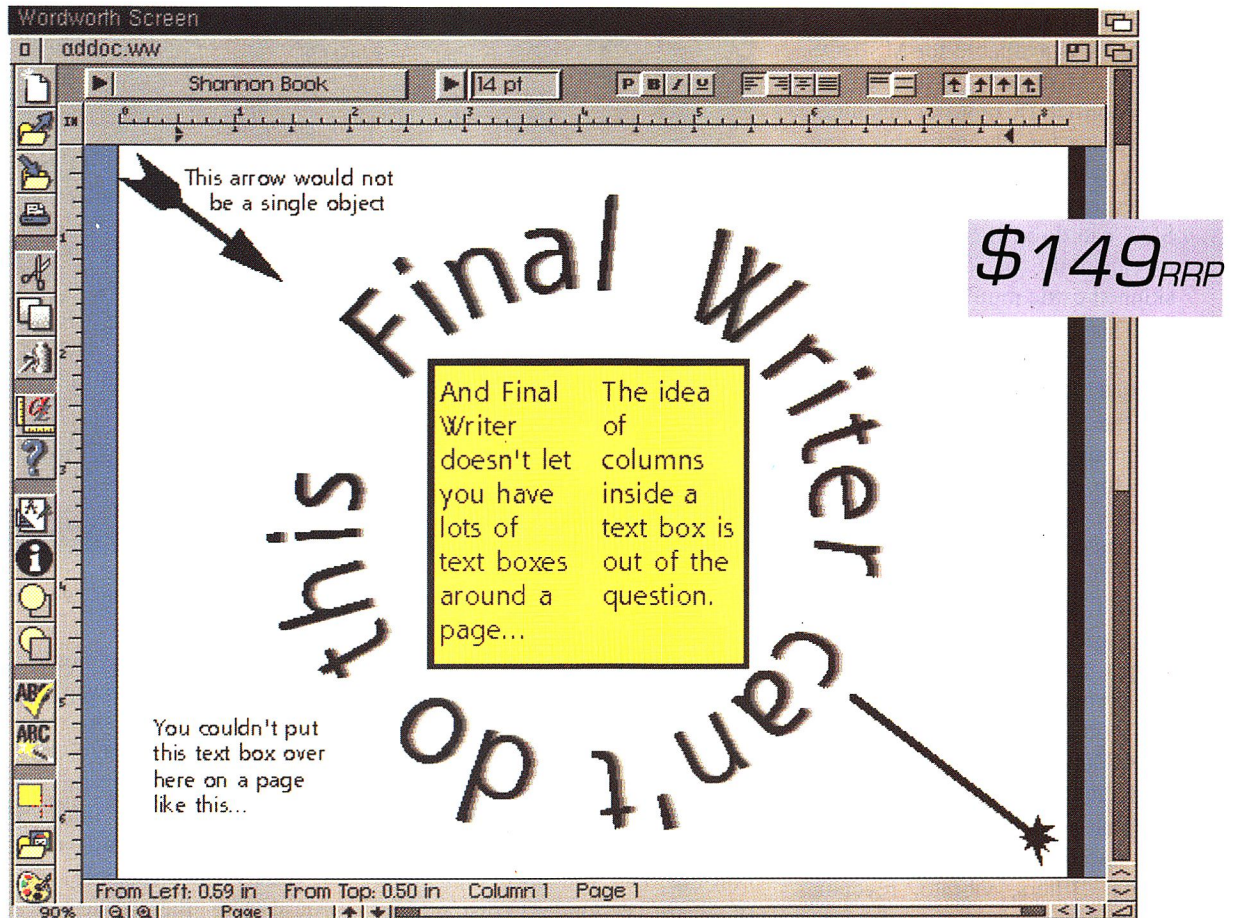
Now here's a game. Two little ships. Thrust, fire. Gravity. Scenery. Enemy guns. Lots and lots of levels. Lots and lots of weapons. Bullets that seek the other guy, to a programmable degree. Special weapons - bombs, missiles, brakes, superthrust, special bullet sprays. Landing pads that repair and resupply you. Simple blast up levels, and races too. Funky graphics, and a nice interface for the many options screens. Brilliant.

If you're on your own, Gravity Force is fairly tedious. No computer opponent, so all you can do is buzz about, practice shooting and generally turn yourself into a really good player so you can toast your friends. That, after all, is what it's about. The animation's nice and smooth, the control system a little odd but easy once you're used to it. This game reminds me strongly of any number of Dogfight style games, only there are so many new bits to tweak. You can play with handicapping systems for ages, and enjoy other nice features like the way big explosions bounce you around, so if the blast misses you you've got to fight desperately not to slap a wall somewhere.

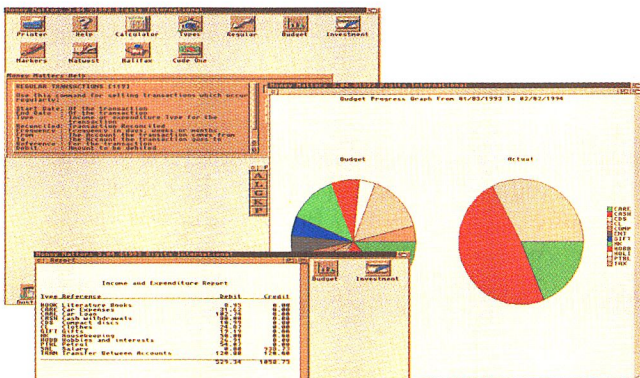
Generally, I think Gravity Force 2 is an excellent way to spend an afternoon with a friend and two joysticks. Go get 'em.

You'll be amazed at what Wordworth 3.0B can do.

Ask your local Amiga dealer for a demo.



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SOX, the Swiss Army Knife of sound processing tools, has seen an update. From a couple of the file dates, I suspect this version might have been around for a while, but you've gotta dig for interesting toys like this.

This comes at a cost. SOX is not a program for Workbench wusses. Roll up your sleeves, get out the Shell and hope that one of the many included scripts does the job for you, or you'll have to venture into the numerous possible options and keep trying settings until you get something that doesn't sound like a collapsing sandpaper factory. There are scripts for the regular Shell and my favourite power shell, CShell, and you also get executable files for 68000 and 020+ systems, with or without math coprocessor.

None of this is covered by the scripts, so welcome to the Land of a Million Options (the manual freely admits that "the syntax is horrific"). Changes since the last version, which I checked out sixteen months ago now, include better documentation for the Amiga version and the ability to load SUN ADPCM compressed .au files, of which I have never seen one in my life. This distribution also includes mounds of source and other cross-platform muesli which normal humans will not care about.



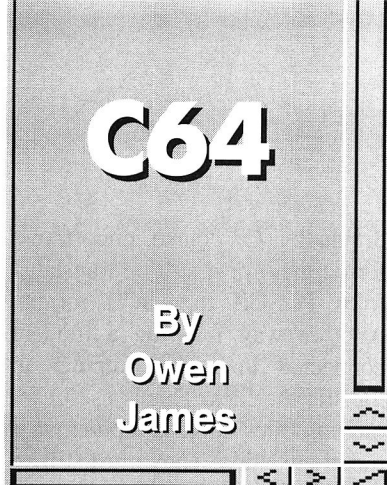
Now it's back and its badder, with more and nastier weapons. If you thought the original Super Weapon was nasty, check out the bigger ones; the best costs almost twice as much, and is worth every penny!

And now, kids, two of you can blast aliens simultaneously in a rather fun team-up mode. As soon as we finish production on this issue, Galaga will be installed on all the office Amigas and we'll be off again. If this issue is more than

That's it for this month. Next month, there'll be a swag of things people have sent to me; I'm getting quite a lot of disks in the mail these days. I like this - it sure beats having to find review software myself - so if you've got a freely distributable package you'd like the world to know about, get it off to me care of Amiga Review at PO Box 288, Gladesville 2111.

I suspect there'll be a little spare space, so I'll include a Mystery Bonus File or two - at the moment, a copy of the excellent Hacker's Dictionary seems favourite. Don't just sit there, order it!





► If you happen to be reading this before October 30th, Victorian public domain enthusiasts may be pleased to know that Alternative Software will be attending a computer swap meet on that date. The meet will be held at the Eaglehawk Town Hall at Eaglehawk, which is just outside of Bendigo. The swap meet will be open between 9.30am and 4.30pm and entry costs are \$2.50.

Alternative Software have a range of over 350 disks of C64 public domain material available, most disks costing around \$4.00. A catalogue detailing all products is available on request.

Latest releases include the Quill compilation pack of 23 text adventures for \$10.00, the SEUCK pack of 9 shoot 'em up games for \$7.50, a digitized music pack consisting of 12 tunes for \$7.50, and a collection of 1,350 graphics for Printshop for \$25.00.

Also available are a beginner's pack consisting of 16 disk-sides of programs suitable for beginners, including word processors, adventures, demonstrations, games, music, programming tutorials etc. for \$30.00, as well as the Tipton Collection for the C128. This is a collection of 40 disk-sides of compressed files for the C128.

To order disks or a catalogue from Alternative Software, write to RMB 221 Sunraysia Highway, Stuart Mill, Victoria 3478.

C64 FAQ

This month I've compiled a list of the most frequently asked questions I've received over the past four years, which will be continued next month. Details on how to submit questions of your own are printed below.

Are C64s still in production?

Surprisingly, yes, although quite likely under another name. Production rights have been purchased by several companies in far-off ends of the world in which C64s are still the only affordable computers. They disappeared from the Australian and most other markets several years ago.

*“Surprisingly,
C64's are still in
production although
not in Australia”*

Are software and peripherals still available for them?

Yes, although it may take some hunting to find what you're looking for. In the UK, where the C64 is still enjoying popularity, games are still being released and a fair amount of productivity software is still available. GEOS is back in production in the US, as are several hardware add-ons from CMD.

Many Australian users have found a reasonably successful way of obtaining software and accessories for the C64 is to buy direct

from UK mail-order houses, such as those that advertise in Commodore Format magazine. Look for advertisers that will accept international credit cards.

Should I upgrade to an Amiga or PC?

The question of whether to upgrade to either an Amiga, PC or another type of computer depends entirely on your circumstances and personal choice. Yes, you can do more with a PC or Amiga, and there is a greater range of software, but you need to seriously ask how it will benefit you.

If your C64 is used only for tapping out the quick note to Mum or for keeping a database of your favourite bottle tops then the benefits of a whizz-bang Amiga will be far from apparent.

Where can I get a printer for my C64?

The C64 doesn't have a regular parallel or serial port for connecting a printer. In other words, the printer hooked up to your office PC won't interface directly to your C64.

There were several printers designed specifically for the 64 which connected directly, however these are no longer in production. To use a regular dot matrix, laser or bubble jet printer will require some form of interface.

The Xetec Graphics interface is one such box of tricks which will allow almost any standard printer to be used with almost any software, but sadly these are now only available second-hand. GEOS users can also make use of the GeoPrint cable, which is essentially a software and cable solution, but will work only with GEOS software.

Where can I get help for my C64?

There are several sources of help and reference material for your 64. User groups, although diminishing in size, are a great way to network with other like-minded users to exchange helpful ideas.

Also for modem users is the Australia-wide 64_Talk echo and the international CBM echo. These echoes can put you in touch with some of the most knowledgeable C64/128 users around the globe. The internet also has several conferences dedicated to 8-bit Commodore computers.

Last but not least is The C64 Column. Send any questions and pleas for help to me care of PO Box 288, Gladesville NSW 2111 or via FidoNet to 3:713/888.999.

What is The A64 Package?

The A64 Package is a software emulator for Amiga computers. Essentially, it allows Amigas to run C64 software and to take advantage of C64 printers and disk drives. Although not terribly fast

and experiencing the odd compatibility problem, it works quite well and offers a solution to the nostalgia trip many Amiga users seek shortly after selling their old C64 systems. The A64 Package is/was a shareware package. Most bulletin boards have it online, as do many PD houses. The recently released version 3 is a commercial product, and includes the necessary hardware for connecting to C64 devices.

Can I make use of a fax modem with my 64?

Not completely. Unfortunately there's no fax software for your C64, so you'd be limited to using it as just a data modem.

How can I transfer my word processing and data files to a PC or Amiga?

There are many ways of achieving this. The first is a null-modem cable. This connects between your C64 and the PC or Amiga. A terminal program is used on each computer, and the files are uploaded/downloaded in-

dividually. Of course, once transferred they must still be translated from PetSCII to ASCII format. Another way is using a modem connected to each computer to transfer the files. This is useful for moving files to a computer at a remote location. They must still be translated into ASCII.

Finally, you can pay a service bureau to do the transfers and the translations for you, and their equipment can usually transfer the files several hundred at a time, often stripping any other unnecessary control data along the way.

For more information on this last method, contact Code One Computer Services on (047) 57 3982.

Next month we'll continue with the most frequently asked questions. In the meantime, if you'd like to add some questions of your own please drop me a line care of:

The C64 Column, PO Box 288, Gladesville NSW 2111 or via Fido Netmail to 3:713/888.999.



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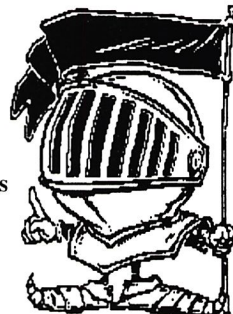
A special announcement to new & existing customers:

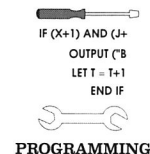
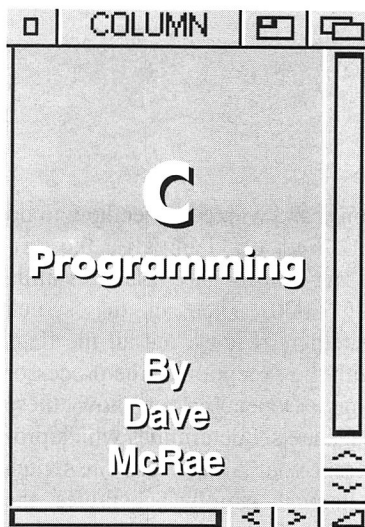
We are now offering 2 free PD disks with every 10 you purchase & 5 free PD disks for every 20 you purchase! Our price? \$3.00 per disk (postage free within Australia). Guaranteed disks. Fast & friendly service! Exchange incompatible disks.

* Thousands of disks of games, utilities, educational etc.

FREE SOFTWARE: Send along a blank disk with your order and receive our monthly Mystery PD title free! Free isn't a dirty word at Mallee Software.

Still the best & getting better! What is it! The Mallee Hyperlog. Our customers love our disk catalogue! Call or write for your free copy today. Soon: Hyperlog MkII.





Displaying Tasks

Well, here we are again. This month I'll try to keep the listing down to a more manageable length.

Whenever any of us sings the praises of the Amiga, one of the first advantages mentioned is its ability to multitask. This capability is provided by Exec, one of the Amiga's many system libraries. Exec is responsible for system resource housekeeping. This includes scheduling tasks to run, tracking memory allocation and providing services such as inter-process communication and list management functions.

To this end, it should be noted that the Amiga operating system is full of lists! Memory allocation is handled in lists. In fact devices, ports, resources, interrupts and libraries are all maintained on linked lists. The chief advantage of using linked lists is there is no built-in limit to the number of entries that can be added, assuming RAM is available. This is the design philosophy of the Amiga and is what really separates its operating system from most other platforms. There are certain software companies in the world (read largest) that seem intent on building limits into everything they produce, then, a few years down the track, making a big song and dance about how they have lifted the limit! Marketing is an amazing thing!

So where are the tasks? They are also kept in lists managed by Exec. Actually there are two lists - the Waiting list and the Ready list. Most of the time, tasks are waiting for something to happen. This can be input from the keyboard in a word processor, mouse movement in a paint package or completion of outputting data to a modem through the serial port. During this time, it is wasteful to have the processor looping, waiting for an event.

In an operating system like DOS (I use the term operating system here with some apprehension) there is no multitasking at all so the processor will sit in a loop waiting for input from the user. Because there are no other tasks running this is not a problem. However on the Amiga there can be any number of tasks running. Tasks in the Waiting list receive no processor time, leaving the processor free to service only those tasks

that actually require processor time. Once whatever it is that the task has been waiting for happens, Exec puts that task in the Ready list. Now when Exec switches tasks, it looks in the Ready list, and based on the priority of any tasks in the Ready list, launches the next task to run. The currently running task does not appear in either the Ready or the Waiting lists, but is referenced by a single pointer called ThisTask. An interesting side effect here is everytime you look at ThisTask, it will actually contain a pointer to the task that is looking at ThisTask. This is unavoidable, as to do anything including looking at the ThisTask pointer requires your task to be the active task.

Here is an example of the output of the Tasks program. For more information on what each field means, see the printprocs() section below.

```
Total Tasks = 31 : Dispatch Count = 341220 : Processor = MC68030
Type      TCB      Q      Name      No.      Pri.      CLI Name
-----
Proc (0x07c42600) W  nickprefs 37.9 (5.3  0      0
Proc (0x07c44db8) W  ConClip Process  2      0      ConClip
Proc (0x07c50258) W      Arq      0      3      SYS:tools/commodities/ARQ
Proc (0x07c624c8) W  Background CLI  4      3      SYS:TOOLS/Things/SM
Proc (0x07c31560) W  OpalReq_Task  0      0
Proc (0x07d020c8) W  Opal_HK      0      0      EndCLI
Proc (0x07c36420) W  IPrefs      0      0
Proc (0x07d5e428) W  Background CLI  7      0      c:addmenu
Proc (0x000754c0) W  REXXMaster  0      4
Proc (0x07d24110) W  dopus_arbiter 0      0
Task (0x07e1a176) W  printer.device 0      0
Proc (0x07dfe6d0) W  RAD      0      10
Proc (0x07c1c018) W  ramlib      0      0
Proc (0x07c88c38) W  DormantCygusEd 0      1
Proc (0x07ce00b0) W  dopus_task  0      0
Task (0x07c0c798) W  console.device 0      5
Task (0x07d1a568) W  dopus_hotkeez 0      1
Task (0x07c088c0) W  SCSI_bus_handler 0      12
Task (0x07c07c98) W  scsi.device  0      11
Proc (0x07d46480) W  Virus_Checker(C) 0      19
Proc (0x07c0e738) W  DH0      0      10
Proc (0x07c16520) W  DH1      0      10
Proc (0x07d39d90) W  Workbench  5      1      Workbench
Task (0x0005b390) W  dopus_clock  0      1
Task (0x07c06392) W  input.device 0      20
Task (0x07c0cflc) W  trackdisk.device 0      5
Proc (0x07c140a0) W  DF0      0      10
Proc (0x07c20678) W  RAM      0      10
Proc (0x07d6b760) W  CON      0      5
Proc (0x07d69fa0) A  Shell Process  6      0      df0:tasks
Total Tasks = 31 : Dispatch Count = 341220 : Processor = MC68030
```

Now to the listing. This program was compiled with SAS/C version 6.5 using the following options: STRINGMERGE ERRORREXX OPTIMIZE LINK SMALLCODE SMALLDATA VERBOSE STRIPDEBUG GLOBALSYMBOLTABLE=GST:LIBS_GST

Lines 1-24 are just a comment header to describe what this code does and other relevant information.

Line 25 defines a macro called `_USE_SYSDBASE`. This instructs the compiler to perform some voodoo when generating any calls to the Exec library. It speeds up the calling process on Amigas with 68020 and greater processors.

Lines 26-40 include the header files needed by this program to compile successfully. These header files include information on the structures internal to the Amiga operating system as well as letting the compiler know any values that may be used.

Line 41 includes a separate prototypes file. This file contains forward declarations for the compiler. It contains the following: `void main(void); void close_and_exit(char *, int); int getprocesses(void); void getprocinfo(struct Process *, struct tasknode *, char); void printprocs(void); void getBSTRname(char *, char *);`

Lines 42-46 set up a version string which can be displayed using the `:version` command. The header file `Tasks_Rev.h` is generated by a program called "bumprev" which is in the public domain. `Tasks_Rev.h` looks like this: `#define VERSION 1 #define REVISION 1 #define DATE "22.9.94" #define VERS "Tasks 1.1" #define VSTRING "Tasks 1.1 (22.9.94)r" #define VERSTAG "\0$VER: Tasks 1.1 (22.9.94)"`

The tasks program uses only the `VERSTAG` macro.

Lines 47-52 define the library bases used in the program.

Lines 53-57 define the size, position and type of window for input and output from the program. If this program is started from the CLI, these parameters are ignored as all I/O occurs through the Shell window. However, if you double clicked on the icon, the program is started from the Workbench and no I/O window exists. In this case, these parameters are used to open a window on the Workbench screen.

Line 58 defines a Remember structure. This is used with the `AllocRemember()` memory allocation call. This means all memory we allocate using this structure can be freed with one call rather than having to keep tabs on each individual block of allocated memory.

Lines 59-70 set up some macros used in the program. `TASKNAMELEN` sets the size of the task name array that is part of the task node we allocate for each task. The `PROC680x0` macros are used for determining which processor your Amiga is equipped with.

Lines 71-84 set up our task list and describe what each entry in the list will look like.

The main() routine

Lines 90-91 are local variables used in the `main()` routine.

Lines 92-101 open the libraries we are going to use. If any of these fail, we call `close_and_exit()` with an error message and return value.

Line 105 actually does all the work by calling `getprocesses()`. This routine (described later) looks through all the tasks in both the Waiting and Ready lists and builds a list for us to print later.

Lines 106-125 don't really have anything to do with tasks. I just added them because I was

bored and wanted to see how to do this. First off, I initialise the processor string to plain vanilla MC68000. Then in the switch statement, I mask out all the flags with the exception of the processor flags. Depending on how these flags are set determines which processor your Amiga has. The switch statement simply substitutes the digits 1, 2, 3 or 4 in the appropriate place in the string given the flag settings.

Lines 126-127 print an information line in the window. This indicates total tasks, dispatch count and the type of processor you have. The dispatch count is the number of task switches that have occurred since the last reboot.

Line 131 calls `printprocs()` (described later) which is where we print the contents of the list we generated in `getprocesses()`.

Line 135 is where we exit the program by calling `close_and_exit()` with no error message and a zero return code.

So there you go. That's basically what the program does in. Now to explain the routines called from `main()`.

The close_and_exit() routine

This is the common exit routine. If at any stage the program wants to exit due either to error or just because it has finished, it goes through here.

Lines 143-144 print an error message if one has been supplied.

Lines 145-148 check if `IntuitionBase` has been opened. If it has it calls `FreeRemember()` to deallocate all the memory we allocated for our task list. We then close `intuition.library`.

Lines 149-150 check if `DOSBase` is open. If it is we close it too.

Line 151 exits the program,

setting the return code to whatever value was passed to the routine.

The getprocesses() routine

Getprocesses() is where it all happens.

Lines 159-161 define some local variables. Note count is initialised to zero here. Line 162 calls NewList(), which initialises the List structure ready to use the Exec list functions.

Line 163 calls Disable(). This is a biggy! Calling this routine basically turns task switching off. It does this by disabling interrupts, which means absolutely nothing is going to steal the processor from you. This is necessary because if, while casually perusing one of the task lists, you were suddenly cut down in your prime by a task switch, on were revived by a task switch later, the current task you were looking at may no longer be valid. If this happens, you will start to careen down RAM in a random, out of control sort of way. Then the Guru catches you. It is not a good idea to force the system to run in disabled mode for longer than 250 microseconds, as it can seriously degrade other system functions. As a result of the impact this can have on the system, we will gather all the task information first, then restore interrupts with a call to Enable() and then print the list of tasks. Another reason for doing things this way is that most I/O on the Amiga will cause a task to wait for the I/O to complete. If this happens, normal task switching will be restored until our I/O completes. When we gain control of the CPU, we will once again hurtle through memory and crash and burn. Even a printf() can cause this! Hence, we collect all the information first, then print the results.

Lines 164-172 are a "for loop". Here we start at the head of the

Waiting list and move through the list, allocating our tasknode structure for each task we find then call getprocinfo() with a pointer to the current task we have found in the Waiting list, a pointer to our just allocated tasknode structure and a character constant which is used to denote which list we are currently looking at. On return from getprocinfo() we call AddTail() which is one of the Exec list support functions. This function takes our tasknode and adds it to the end of our task list.

Lines 173-181 are another "for loop". This time we gather any information we can find on tasks in the Ready list.

Lines 182-187 add one last tasknode to the task list. This one is for the task. As I mentioned before, the currently running task does not exist in either the Ready or the Waiting lists, but simply has a pointer to it called ThisTask.

Line 188 restores normality to your Amiga. All interrupts and task switching resumes and life continues as if nothing had happened.

Line 189 returns control to the main() routine, passing back the total number of tasks found.

The getprocinfo() routine

Getprocinfo() fills in the tasknode structure with information from the present task in either the Ready or Waiting task lists.

Line 196 declares a local variable.

Lines 197-201 copy some hopefully interesting information from the current task structure to the tasknode. First we copy the task's name, then the task's address. We then copy the character we passed to this routine so we know which list this task was in. Then we copy the type and the task priority. The type can be one

of two values. These tell us whether this is a task or a process. A task is basically a subset of a process. A process has extra information associated with it. This includes CLI environment information and pointers to the standard I/O handles. Most programs you start from the CLI and Workbench are run as processes. Tasks are more generally started by a program itself.

Lines 202-212 check if this is a process and, if so, copy the CLI task number and the CLI name used to execute the program. To see the meaning of this, try executing the program twice, once from the Workbench and once from the CLI and compare these parameters. Also check the different task name. Amazing, huh? If this is a task, we just initialise these to zero.

The printprocs() routine

Printprocs() is called to print a report based on the information we gathered previously in getprocesses().

Line 219 declares a local variable that we use for moving through our task list.

Lines 220-221 output a heading with an underline, describing the different columns in the output. These are:

Type: denotes whether this is a Task or a Proc (process)

TCB: gives the address in memory of the task

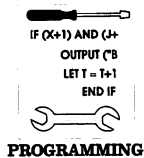
Q: is the list (Queue) this task was found in. R for Ready, W for Waiting and A for Active

Name: is the name of the task

No.: is the CLI task number if applicable, otherwise zero

Pri.: is the priority the task is running at.

CLI Name: is the CLI task name if applicable, otherwise blank



Lines 222-227 are a "for loop" which progresses through our task list printing each task in the list until all tasks have been printed.

The getBSTRname() routine

A bit of history: Originally AmigaDOS was written using a language called BCPL (Basic Combined Programming Language). For AmigaDOS version 2, DOS was rewritten completely in C. However, a lot of the older stuff had to remain looking like BCPL for compatibility reasons. To this end certain parameters passed to and returned from DOS functions are called "B Pointers" as opposed to "C Pointers". BCPL could only address long words, so all "B Pointers" need to be multiplied by

four to get the real address in RAM. Another leftover from BCPL is "B Strings". B Strings look a lot like strings in Pascal. Basically they have a byte in front of the string which says how long, in characters, the string is. In C, a string is simply delimited by a trailing zero byte. This zero byte denotes the end of the string. So now you know why this routine is here, I'll explain it to you.

Line 234 are a couple of local variables for us. The variable count is used to hold the length of the "B String" and is used in a loop to copy the characters from the "B String" and into the "C String".

Lines 235-236 check to make sure our "B String" pointer is valid. If it's NULL (zero) we terminate the "C String" by writing zero

into the first byte, effectively creating a zero length string.

Lines 238-241 copy the "B String" to the "C String". First we get the length of the string into the count variable. Next we loop, copying "count" characters from the "B String" to the "C String". Finally we terminate the "C String" by copying a zero to the last byte.

And there you have it. There are lots of fields in the Process structure. The fields I chose to print here were only possibly interesting. You may want to look at the dosextens.h header file for other fields in this structure.

Until next time, see ya later.



```

Line No. Source
1  /* ***** */
2  /* $Filename:   Work:Dev/C-Saws/ACAR/tasks.c $ */
3  /* $VER:       1.0 $ */
4  /* $Date:      20 Sept 1994 $ */
5  /* ***** */
6
7  /*
8  *----- Legal Stuff -----
9  *
10 *
11 * This code is placed in the public domain and may be used by anyone for anything.
12 * No warranty is issued or implied. This code may or may not do what it is
13 * supposed to do and anyone using it does so at his/her own risk. So there...
14 *-----
15 *
16 * $Description: Example code for showing the task lists $
17 *
18 * $HISTORY:
19 *
20 * <1> 20 Sep 1994 14:20:16
21 * Initial Coding
22 *
23 * End of Work:Dev/C-Saws/ACAR/tasks.c header
24 * ***** */
25
26 #define __USE_SYSBASE
27
28 #include <proto/exec.h>
29 #include <exec/types.h>
30 #include <exec/execbase.h>
31 #include <exec/tasks.h>
32 #include <exec/memory.h>
33 #include <proto/dos.h>
34 #include <libraries/dosextens.h>
35 #include <intuition/intuition.h>
36 #include <intuition/intuitionbase.h>
37 #include <proto/intuition.h>
38 #include <dos.h>
39 #include <stdio.h>
40 #include <stdlib.h>
41 #include <string.h>
42 #include <ctype.h>
43
44 #include "tasks_Protos.h"
45
46 /*
47 *--- Set up version strings
48 */
49 #include "Tasks_Rev.h"
50 UBYTE vers[] = VERSTAG;
51
52 /*
53 *--- Define Library Bases
54 */
55 extern struct ExecBase *SysBase;
56 extern struct DosLibrary *DOSBase;
57 struct IntuitionBase *IntuitionBase;
58
59 /*
60 *--- Setup stdio window parameters for output
61 */

```



```

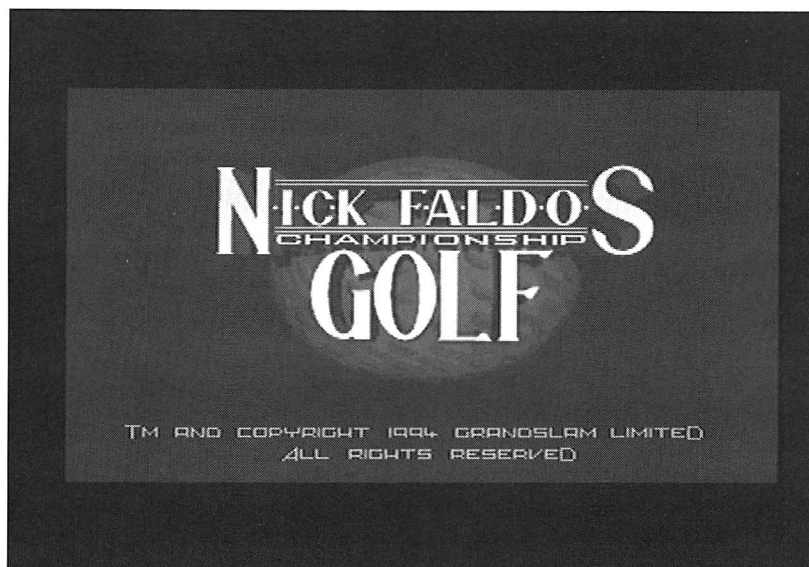
56 char _stdiov37[] = "/auto/close/wait";
57 char _stdiowin[] = "CON:10/10/600/255/Tasks";
58 struct Remember      *TaskMem;
59
60 /*--- Define macros used in program
61 */
62 #define TASKNAMELEN    32      /* Max number of chars in task name array */
63 /*--- Create defines for evaluating processor
64 */
65 #define PROC68000      (0)
66 #define PROC68010      (AFF_68010)
67 #define PROC68020      (AFF_68010|AFF_68020)
68 #define PROC68030      (AFF_68010|AFF_68020|AFF_68030)
69 #define PROC68040      (AFF_68010|AFF_68020|AFF_68030|AFF_68040)
70
71 struct List      TaskList;
72
73 /*--- Define tasknode structure
74 */
75 struct tasknode {
76     struct Node tn Node;
77     LONG      tn tasknm;
78     BYTE      tn pri;
79     char      tn queue;
80     UWORD     tn type;
81     struct Proc *tn tcbaddr;
82     char      tn name[TASKNAMELEN];
83     char      tn CLInm[TASKNAMELEN];
84 };
85
86 /*--- Main routine
87 */
88 void main(void)
89 {
90     int proccount;
91     char      processor[8];
92
93     /*--- Open Exec, DOS and Intuition Libraries
94     */
95     SysBase = (struct ExecBase *)*((ULONG *)4);
96     if (!(DOSBase = (struct DosLibrary *)OpenLibrary("dos.library", 0))) {
97         close_and_exit("Dos library not found!", RETURN_FAIL);
98     }
99     if (!(IntuitionBase = (struct IntuitionBase *)OpenLibrary("intuition.library", 0))) {
100         close_and_exit("Intuition library not found!", RETURN_FAIL);
101     }
102
103     /*--- Go make a list of all processes running
104     */
105     proccount = getprocesses();
106
107     /*--- Initialise processor string
108     */
109     strcpy(processor, "MC68000");
110     switch (SysBase->AttnFlags & PROC68040) {
111         case PROC68010:
112             processor[5] = '1';
113             break;
114         case PROC68020:
115             processor[5] = '2';
116             break;
117         case PROC68030:
118             processor[5] = '3';
119             break;
120         case PROC68040:
121             processor[5] = '4';
122             break;
123         default:
124             break;
125     }
126     printf("Total Tasks = %d : Dispatch Count = %ld : Processor = %s",
127           proccount, SysBase->DispCount, processor);
128
129     /*--- print the list of processes
130     */
131     printprocs();
132
133     /*--- Finish
134     */
135     close_and_exit(NULL, RETURN_OK);
136 } /* main() */
137
138 /*--- close_and_exit() - Common exit routine. Print any error messages, deallocate memory,
139     --- close-libraries and return value to system
140 */
141 void close_and_exit(char *errstr, int retcode)
142 {
143     if (errstr)
144         puts(errstr);
145     if (IntuitionBase) {
146         FreeRemember(&TaskMem, TRUE);
147         CloseLibrary((struct Library *)IntuitionBase);
148     }
149     if (DOSBase)
150         CloseLibrary((struct Library *)DOSBase);
151     exit(retcode);
152 } /* close_and_exit() */
153
154 /*

```

```

154  *--- getprocesses() - Routine works through Exec schedule lists,
155  *--- allocates space for task info
156  */
157  int getprocesses(void)
158  {
159      struct Process *proc;
160      int count = 0;
161      struct tasknode *tnode;
162
163      NewList(&TaskList);
164
165      Disable();
166      for ( proc = (struct Process *)SysBase->TaskWait.lh_Head;
167            proc->pr_Task.tc_Node.ln_Succ;
168            proc = (struct Process *)proc->pr_Task.tc_Node.ln_Succ, count++) {
169
170          if ((tnode = (struct tasknode *)AllocRemember(&TaskMem, sizeof(struct tasknode),
171              (MEMF_PUBLIC|MEMF_CLEAR))) == NULL)
172              close_and_exit("Could not allocate memory for tasknode!", RETURN_FAIL);
173
174          getprocinfo(proc, tnode, 'W');
175
176          AddTail(&TaskList, (struct Node *)tnode);
177      }
178
179      for ( proc = (struct Process *)SysBase->TaskReady.lh_Head;
180            proc->pr_Task.tc_Node.ln_Succ;
181            proc = (struct Process *)proc->pr_Task.tc_Node.ln_Succ, count++) {
182
183          if ((tnode = (struct tasknode *)AllocRemember(&TaskMem, sizeof(struct tasknode),
184              (MEMF_PUBLIC|MEMF_CLEAR))) == NULL)
185              close_and_exit("Could not allocate memory for tasknode!", RETURN_FAIL);
186
187          getprocinfo(proc, tnode, 'R');
188
189          AddTail(&TaskList, (struct Node *)tnode);
190      }
191
192      if ((tnode = (struct tasknode *)AllocRemember(&TaskMem, sizeof(struct tasknode),
193          (MEMF_PUBLIC|MEMF_CLEAR))) == NULL)
194          close_and_exit("Could not allocate memory for tasknode!", RETURN_FAIL);
195
196      getprocinfo((struct Process *)SysBase->ThisTask, tnode, 'A');
197      count++;
198      AddTail(&TaskList, (struct Node *)tnode);
199
200      Enable();
201      return(count);
202  }
203  /* getprocesses() */
204
205  /*--- getprocinfo() - Fill in process info for each entry in our new task list
206  */
207  void getprocinfo(struct Process *proc, struct tasknode *tn, char queue)
208  {
209      struct CommandLineInterface *CLInameptr;
210
211      strncpy(tn->tn_name, proc->pr_Task.tc_Node.ln_Name, TASKNAMELEN);
212      tn->tn_tcbaddr = proc;
213      tn->tn_queue = queue;
214      tn->tn_type = proc->pr_Task.tc_Node.ln_Type;
215      tn->tn_pri = proc->pr_Task.tc_Node.ln_Pri;
216
217      if (proc->pr_Task.tc_Node.ln_Type == NT_PROCESS) {
218          tn->tn_tasknm = proc->pr_TaskNum;
219
220          CLInameptr = (struct CommandLineInterface *) (proc->pr_CLI << 2);
221
222          if (CLInameptr)
223              getBSTRname(tn->tn_CLInm, (char *) (CLInameptr->cli_CommandName << 2));
224          else
225              tn->tn_CLInm[0] = '\0';
226      } else {
227          tn->tn_CLInm[0] = '\0';
228          tn->tn_tasknm = 0;
229      }
230  } /* getprocinfo() */
231
232  /*--- printprocs() - Print our task info list to the output window
233  */
234  void printprocs(void)
235  {
236      struct tasknode *tn;
237
238      puts("Type      TCB      Q      Name      No.      Pri.      CLI Name");
239      puts("-----");
240
241      for (tn = (struct tasknode *)TaskList.lh_Head; tn->tn_Node.ln_Succ;
242            tn = (struct tasknode *)tn->tn_Node.ln_Succ)
243          printf("%s (0x%08x) %c-%20.19s %3d %3d %15s",
244              (tn->tn_type == NT_PROCESS) ? "Proc" : "Task", tn->tn_tcbaddr,
245              tn->tn_queue, tn->tn_name, tn->tn_tasknm, tn->tn_pri,
246              tn->tn_CLInm);
247
248  } /* printprocesses() */
249
250  /*--- getBSTRname() - Take a BCPL string and write it to a C string
251  */
252  void getBSTRname(char *c_name, char *b_name)
253  {
254      UBYTE count, i;
255      if (!b_name)
256          c_name[0] = '\0';
257      else {
258          count = *b_name++;
259          for (i=0; i<count; i++) {
260              c_name[i] = (*b_name++);
261          }
262          c_name[i++] = '\0';
263      }
264  } /* getBSTRname() */

```

► No game library is truly complete without at least one golf simulation. It may be pitch black and pouring down outside, but you can still amble down manicured fairways in pursuit of a tiny white thing, without a care in the world.

Nick Faldo's Championship Golf is an excellent example of the breed. The first thing that strikes you is how pretty it all is. All the trees are beautifully smooth and don't turn to Lego if you're close to them - and they shed leaves realistically when you thwack a ball into them. The slopes are nicely shaded and behave realistically, and you can play in spring, summer or winter for different terrain characteristics. Up to four humans can play a round, and there are eight computer opponents too, ranging from the scattergun tactics of Davey Divot up to the unnervingly good Faldo himself. You can select up to 13 clubs from the 16 on offer to stock your golf bag (the putter's automatic) and you can choose one of four caddies, all of whom say impertinent things about your golfing abilities unless you turn them off. The swing control's much the same as you've seen in every other golf game - click to start, click to set power, click to set hook, slice or straight, but there's also a wrist snap option at the top of the scale

which makes the aiming bar move twice as fast but give 10 per cent more power. You can play with your stance a lot; there are five foot positions for open and closed stances and you can also set the ball forward or back. The ball can land in three layers of rough and three layers of sand, including the dreaded plugged ball, which is best extracted with a vacuum cleaner.

Putting's well done, too. In the absence of 3-D computer displays, the greens in golf games can have two possible appearances - a puzzling featureless expanse, or a Tron-like topographic grid. Faldo's uses the latter. Bunkers look vaguely subterranean but work realistically; water hazards give you an irritating splash when you hit them. The sound effects are sparse but acceptable; the music's resolutely average.

To top Faldo's off, there's a coaching mode where the infallible Nick leads you through all aspects of the game, giving surprisingly useless hints upon request. The coaching is irritating at first but essential if you want to really humiliate your friends. The game's quite playable even with the squishy CD32 joypad; if you're looking for a golf simulation and you've got a CD32 this is the one to get.



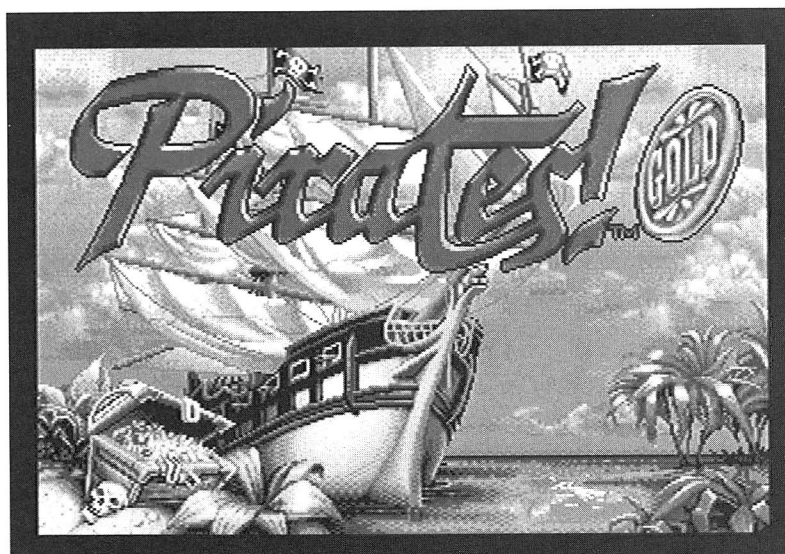
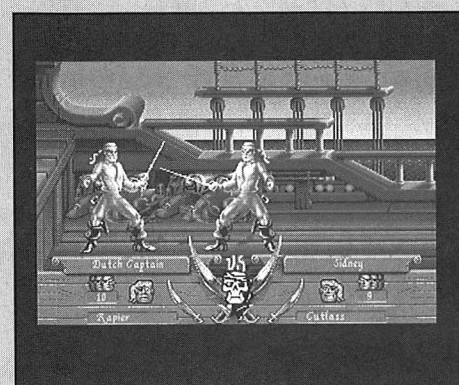
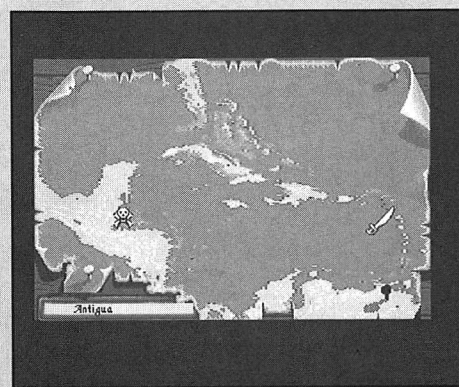
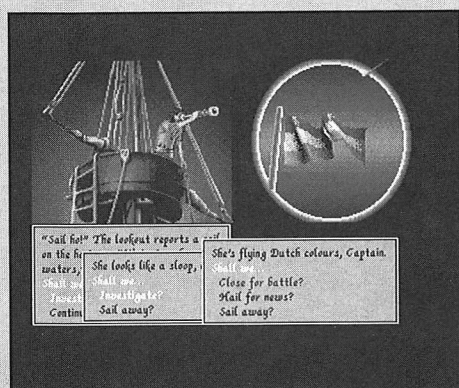
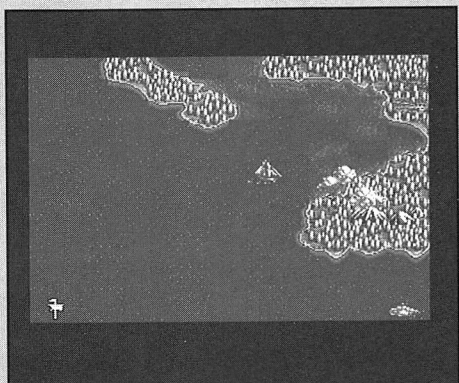
Nick Faldo's Championship Golf

Distributor:

Computer Affair

RRP: \$69

Phone: (02) 417 5155



People have been remaking movies for ages; remaking games is a more recent development. A remake is less than a sequel; it's the same game with different wrapping. The game may look better, sound better and possibly be easier to play, but if you were good at the old version you should be good at the new one, too.

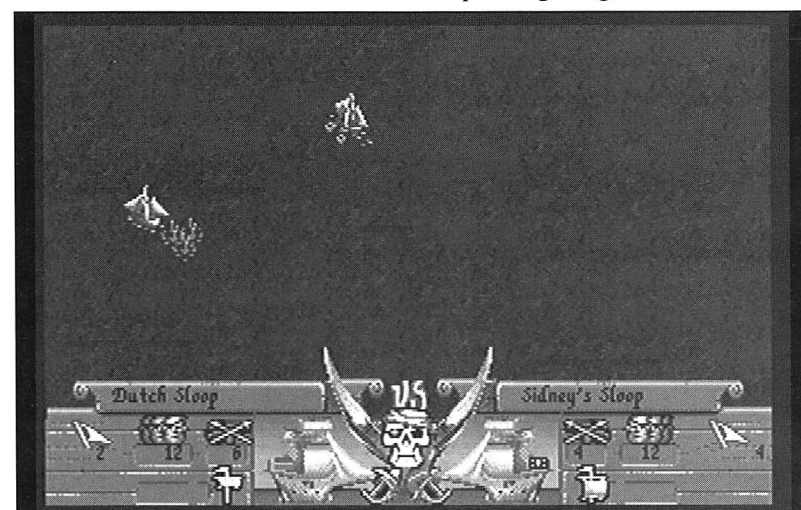
Pirates was an excellent game in its day, and it's still pretty good today. You're a swashbuckling buccaneer who starts with a weedy little ship and a solid determination that what belongs to other people has only been put there in error. This is back in the days when monarchs fought their wars partly by getting mercenary cutthroats to plunder enemy cities, and so you're encouraged to shoot

up ships flying the flag of anyone unfriendly to you, and plunder their towns mercilessly.

There's also nothing stopping you turning on your country and beating up everyone you meet - except, possibly, the status of international outlaw.

As you progress you'll collect extra ships, more men and cannon and, of course, more money, which you can use to buy more gear or pacify your crew. There are also three commodities - food, goods and sugar - which you mainly get by plundering innocents but can pay for if you're into trading.

You split your time in Pirates between plying the high seas between ports of various nationalities, meeting the occasional other ship and getting news from them





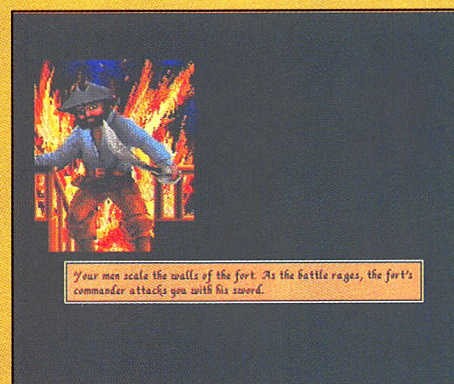
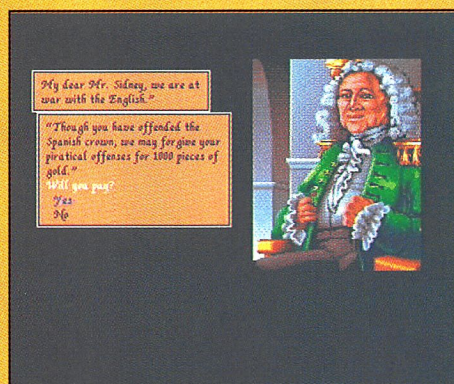
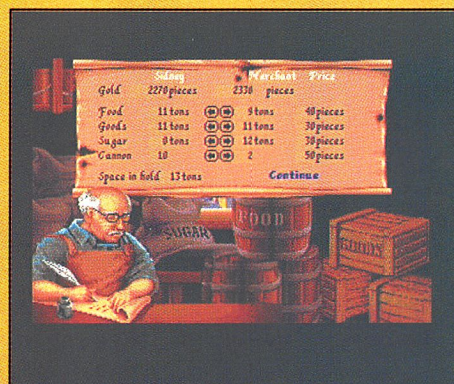
or pounding them to matchwood - you can also capture ships, by boarding them and crossing swords with the enemy captain. As in the old game, captains fight according to the quantity and quality of the men under them; if you beat the captain, you've won the battle.

You can drop into any of the cities, provided they're friendly; otherwise you have to try to sneak in, or attack openly. This means more cannon work as you demolish any defensive forts, and then a bit more swordplay.

Previous players will find everything about the game considerably improved; newcomers wouldn't know Pirates is an ant-

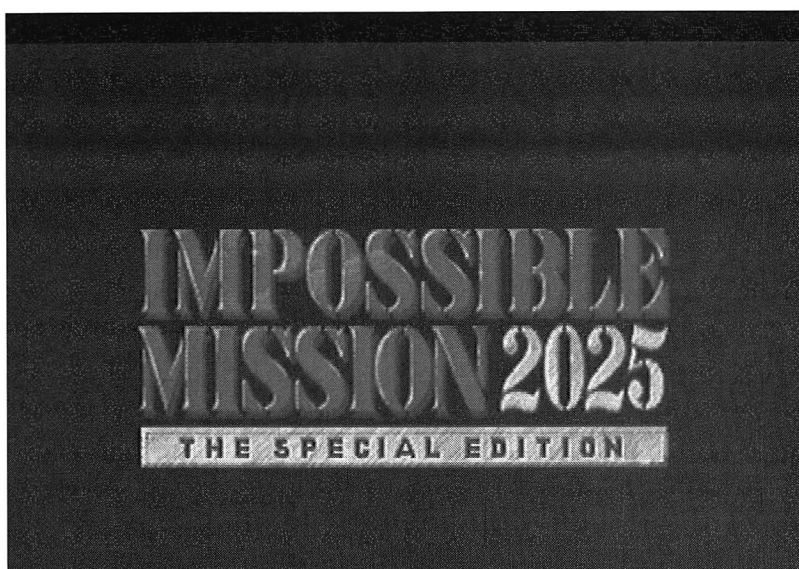
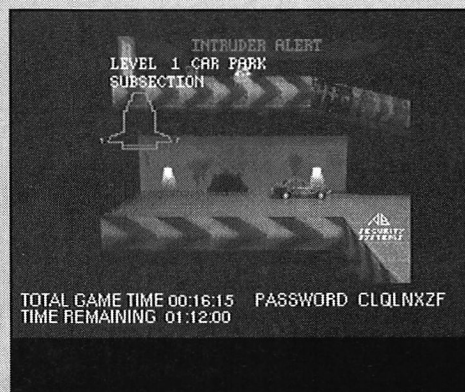
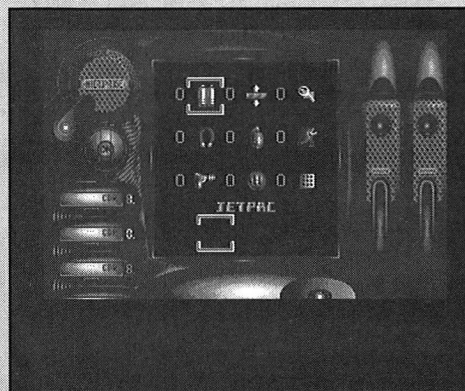
ique unless somebody told them. Everything has groovy AGA graphics, there's the traditional funky animated intro, and despite everything being very decorative you can actually get around the game quite easily. No fumbling through options screens and menus; even with the unwieldy standard CD32 controller you can easily hop to the map while navigating around the islands, or use your options screen almost any time, or handle transferring goods.

If you've played Pirates before and would like to again, this is a good game. If you've never played it, it's still a good game. Check it out.



Pirates GOLD

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"Stay awhile - stay FOREVER!"

It says something about this dressed up second sequel to the original 80's bestseller game that the above, famous words don't feature. Elvin Atom Bender may be back, with a new and typically dastardly plan to blow the planet to weeny bits for the heck of it, but his trademark catchphrase isn't. Neither, I'm sad to say, is much of the original's gameplay.

The basic idea's the same. Impossible Mission, whichever version, is a platform game in which you work your way through umpteen rooms in the Big Bad Guy's tower, solving puzzles, searching objects and finding goodies. It's all done against a time limit; there's tons of time, provided you don't die. Every time you die, you lose ten minutes. It'd be quite easy to navigate the mazes of platforms and lifts if it weren't for the nasty, scooting, zapping robots that inhabit the joint; it's possible to freeze the droids or even blow them up, but it's not easy.

Personally, I liked Impossible Mission II more than the first attempt. The graphics were better, the sound vastly improved, and the levels more devious, but it kept the same basic flavour and the only things missing were the toilets, which when you searched them

encouraged unsophisticated observations.

Unfortunately, IMII isn't on this disc. You do, however, get an authentic copy of the original IM which you can play from the starting menu. The original is of historical interest, but the graphics are very very dated and the sound's awful. You have been warned.

The menu lets you set the game difficulty, and also choose who you want to play. IM2025 features three possible characters - a stereotypical rogue GI, a cybernetically enhanced female gymnast and a T2-style liquid metal robot, who is not nearly as nifty as he sounds and can't do any cool morphing stuff. The girl moves fastest, the robot slowest, and that seems to be the extent of the difference.

The game looks quite different. The old version had each room on one screen, with everything clearly visible so you always knew when it was safe to go down that lift or step off that platform. The levels are now far, far bigger, taking up lots of screens and scrolling as you move, and this means you don't know what's coming and it's much harder to keep it all together in your head.

This compounds the old problem of not being able to move while on a lift or change its direction halfway, which was about the



only thing that annoyed me about IMII.

When you're using one of the location terminals that tells you where things are, or when you die, the screen goes scroll, scroll, scroll, scroll, scroll. It does not scroll faster if you've seen that bit before. It does not, ever, just skip to the bit you want to see. It is hard to fully understand how annoying this is without experiencing it.

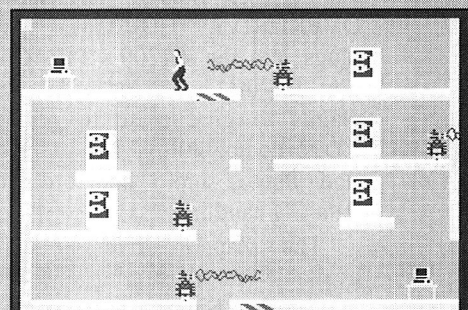
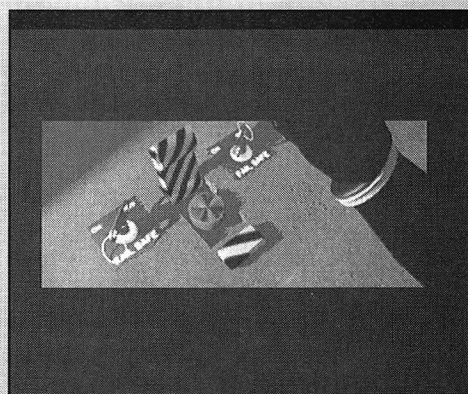
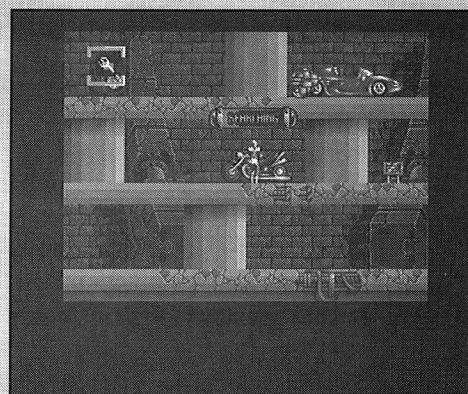
There are plenty of bonuses, some quite cool. There's guns and grenades instead of IMII's land mines, there's a cloaker to make you invisible to the bad guys, and a holo-disguise that makes you look like a robot but makes it impossible to jump or use lifts. There are the usual lift resets and robot freezers plus a portable magnetic lift mover, and you can also get a gizmo that lets you search faster. Probably the niftiest of the power-ups is the jetpack - this lets you hover around the level, disregarding walls and floors, and makes it much simpler to get around the otherwise tediously huge areas. It's got limited fuel, though.

There are some quite pointless subgames; a couple of the several flavours of computer terminals give you a boring little shoot-em-

up and a prettified Simon Says game, neither of which captivated me or had anything to do with the rest of the game. The get to the next level puzzle involves re-assembling a circuit board from fragments found on the level - in English, this means a prettified sliding block puzzle.

There are many more types of robot to get in your way, and not all of them are shootable. There are even flying robots to hunt you if you get the jetpack, which otherwise makes the game much simpler although you do have to guard against building up too much speed against the deceptively slow-moving background when there aren't any foreground landmarks to refer to.

Impossible Mission 2025 is undeniably pretty. It has a nifty animated intro and similar scenes between levels, which are really cool the first two times and subsequently are useful for impressing Sega-owning friends. There are also lots of nice power ups and more bad guys. But it does not have the playability of version II. There's no comparison with the original version in terms of programming sophistication and aesthetic value, but neither of the Impossible Missions on this disk is fabulous. □



The original.

Impossible Mission

Available from:
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RRP: \$69

Phone: (02) 417 5155



Turn your A1200 into a CD32...almost

By Daniel Rutter

► Commodore promised a CD drive for the 1200, to let it run CD32 software, ages ago. Prototypes have actually been made, but with Commodore's plunge into receivership you're not going to be seeing the Commodore CD1200 in the stores any time soon.

This doesn't mean CD32 compatibility for the A1200's not yet possible, though. The Zappo OVERDRIVE CD-ROM drive plugs into the A1200's PCMCIA port on the left hand side, and claims to give close to perfect CD32 compatibility, not to mention Photo, audio and ordinary data CD handling.

The Zappo drive is now available in Australia, and the good folk at Sigmacom let us have one to evaluate.

Setting Up

The drive comes in a plastic case that makes it scarcely bigger than the Mitsumi mechanism it contains; there's no bulky power supply, because the drive runs from an included AC adaptor.

You get a cable that connects the PCMCIA port to the drive, and an audio cable; the Amiga's RCA audio connectors hook up to the back of the drive, and you plug

your existing audio cable into a second set of RCA connectors on the drive. This lets the Zappo mix CD audio with Amiga sound.

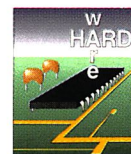
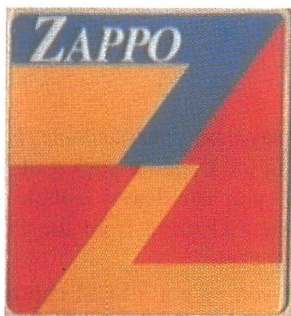
Once these simple connections are made, you only have to hook up the hefty AC adaptor and then install the software. This part's clumsy. Nobody seems to have told the makers of the Zappo about Commodore's Installer utility, so the install routine uses a custom script with no options and requires you to drag the icons for the ancillary PhotoCD and CD player programs to wherever you want them by hand. The installer patches your startup-sequence and saves the old one as startup-sequence.std, which allows an included uninstalling script to put everything back the way it was. If something else has patched

the startup-sequence since you installed the Zappo drive this will overwrite its changes, but it works well for temporary installs at a mate's place.

If for some reason you don't have a hard disk in your 1200, you can run the software from the installation floppy.

The Zappo system actually installs two CD drivers. One of them's the one that handles CD32 emulation, of which more later. The other one gives you a CD drive on your Workbench, called CD0, which you can access like any other device. This makes it easy to use simple CD data discs like the Fred Fish library discs, the Aminet discs or what have you. The CD driver software handles disc changes perfectly.





CD32 Compatibility

There are two big problems with getting an A1200 to emulate a CD32. First, the A1200 has Workbench 3.0 in its Kickstart chip, while the CD32 has Kickstart 3.1. The main difference is that 3.1 contains support for booting from CD-ROM; a 3.0 machine can't boot directly from a CD-ROM drive. The Zappo system gets around this by putting a little program at the very top of your start-up-sequence which does nothing unless you've got the left mouse button held down when it executes. It then gives you the option to boot normally, boot from CD-ROM or boot Kickstart 3.1, which requires a Kickstart 3.1 kickfile which you can't legally own. Or maybe you can. Perhaps Commodore used to sell them, or something. Nobody seems sure, these days. In any case, to install a 3.1 kickfile, you need extra fast RAM, or it'll eat a half megabyte of your existing two megabytes and software will run out of RAM. If you don't use a 3.1 kickfile, you can get the full 3.1 update, chip, disks and manuals, which will cost you around \$200 from SigmaCom.

The other big problem with getting CD32 software going on a 1200 is that the CD32 contains a special graphics manipulation chip called Akiko, that does chunky to planar conversion. The 1200 has no Akiko, so software that wants it will fall in a heap. The Zappo dodge for this one is to emulate Akiko in software, which is billed to work almost perfectly. It's hard to tell which problems are caused by the older operating system and which by the lack of a real Akiko.

CD32 Tests

I grabbed a pile of CD32 software from around the office and hurled it at the Zappo, and the results weren't great. Sabre Team played its title music and died. James Pond 3 made it to the title screen, but no further. Brian the Lion let me select my language and get as far as starting a game, then carked it. Fury of the Furries, on the other hand, worked absolutely fine.

The original CD32 demo disc was almost OK, except for CDXL animations, which didn't work, and a couple of minor sound glitches. James Pond 1 was fine, except for its CDXL intro animation, which didn't play. The CD32's included game disc was OK - Oscar played fine, Diggers wouldn't work with mouse control but was otherwise OK.

Nigel Mansell's World Championship, on the other hand, died a long, agonising death of graphic corruption. But D/Generation and Microcosm worked fine.

The Zappo software lets you use a regular joystick to control CD32 games. All the extra CD32 controller buttons are remapped to the keyboard - the forward and reverse buttons are replaced by the right and left cursor, the green button by F1, yellow by F2, blue by F3 and play/pause by F4. You can also use the keypad for direction control if you like, with enter for fire, but keyboard control is, in general, lousy, despite the fact that you can redefine all of the keys to anything you like by the simple technique of editing a user-vicious Mountlist entry.

A far better idea is to supplement your \$600 Zappo purchase with a \$30 or so CD32 controller, or the sexier and more expensive Competition Pro model which we'll be reviewing in these pages shortly.

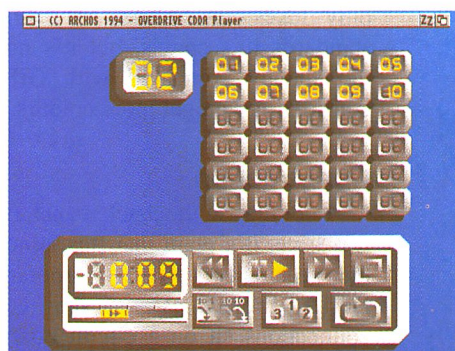
Other problems

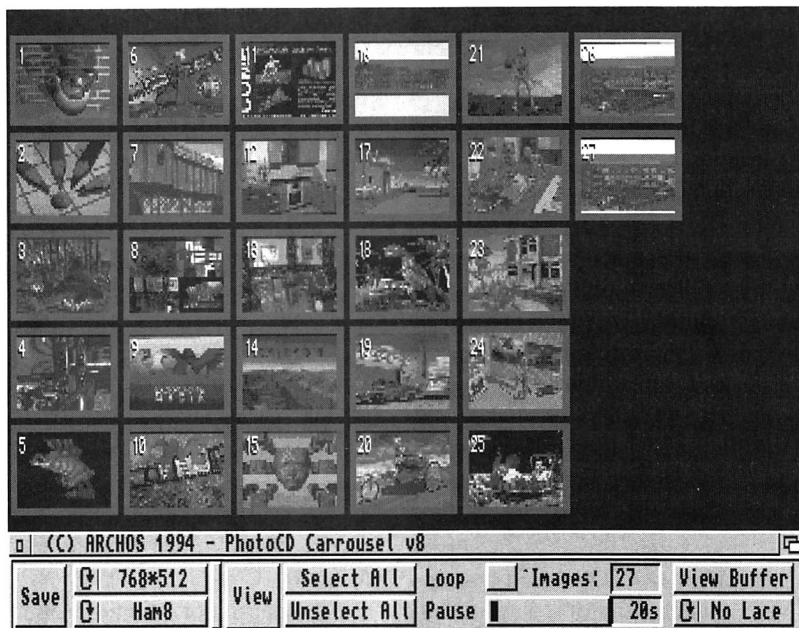
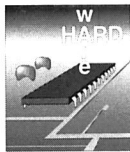
One annoying feature of the Zappo drive is that the mixing of CD audio and computer sound is badly unbalanced. If you're playing a game that's got CD music behind the action, the CD will drown out the computer by a wide margin, and there's no volume control; not even a trimpot on the circuit board. The reason for this is simple; the Zappo does an uncompensated mix of the two signals, and the Amiga's audio signal's at a lower voltage than the normal one volt audio component line out level. But the designers knew that - why didn't they take it into account?

Another minor irritation is that, when playing CD32 games, if you ever boot the system without a disc in the drive, it won't recognise another one until you load Workbench and change discs or turn the machine off and on.

Accessory Software

The CD player software's acceptable, but not exciting. When you run the program, it opens an AppIcon on the Workbench when and only when an audio CD is in the drive. Double clicking the icon opens a screen which imitates the standard CD32 CD player but without the nice animations. You can do basic track selection and programming, track scanning and random play, with the usual time displays, and that's it. There are no fancy database features.





The PhotoCD software, on the other hand, is excellent. It is for some reason called "Carrousel", and if you've got a PhotoCD disc inserted it automatically displays a miniature thumbnail image of every image on the disc, 35 thumbnails at a time.

You can click on images to select them, and then view them as a slideshow or convert them to 256 colour, HAM8 or 24 bit IFF images in several resolutions.

PhotoCD is a notoriously slow display format, and Carrousel's display speed compares favourably with that of other similar programs; displaying 768 by 512 pixel HAM8 images from PhotoCD takes about 16 seconds on a standard 1200 with fast RAM; if you drop to 768 by 256 resolution it only takes 10 seconds. By IFF standards this crawls, but it's not too shabby compared with GIF, considering you get more colours.

Construction

Looking at the back panel of the drive, it's plain that this is not the product of a Big Corporate Design Project. All of the rear connections sit on a circuit board

glued to the back of the Mitsumi drive; nothing's screwed to the plastic case itself.

The case is held on with four screws; taking it off reveals that although the circuit board may have something of a W. Heath Robinson look about it, it's all solidly enough made. Don't you worry about the little piece of cork padding in the corner or the pop rivet holding the earthing/heatsink foil onto the regulator. The Zappo won't come to bits of its own accord.

Overall

The Zappo drive, without Workbench 3.1, falls short of its major aim of letting you play CD32 games on your 1200. Some work, some don't. On the other hand, its PhotoCD capabilities are excellent and it works just fine with any regular CD-ROM data disc, giving you a double speed CD-ROM drive without making you shell out for an expensive SCSI controller. If you've already

got, say, an unexpandable RAM card in the trapdoor socket of your 1200, you can leave it there and run the CD drive from the PCM-CIA socket.

If you've got a SCSI controller in your 1200, and you don't want CD32 compatibility, a double speed SCSI CD-ROM in a clunkier external case would be cheaper. Something sexier, like an external NEC 3X drive, would be more expensive but faster.

And if you want proper CD32 compatibility, you're looking at another \$200. If all you want is CD32 games, amass your \$800 and try to buy one of the consoles and a 1084 monitor. 100% compatibility and the use of your 1200 while somebody else is playing a game.

Remember, with gadgets like Paravision's SX-1 (reviewed last month) you can bring a CD32 up to 1200 spec for not much more than it costs to get the Zappo going - and the CD32's cheaper to start with!

So, in general, I can't give the Zappo drive an unqualified recommendation. As it stands, it doesn't do everything it says it will. But it's still a reasonably cheap and simple A1200 CD-ROM, which is a good thing.

□





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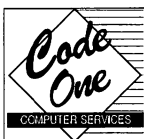
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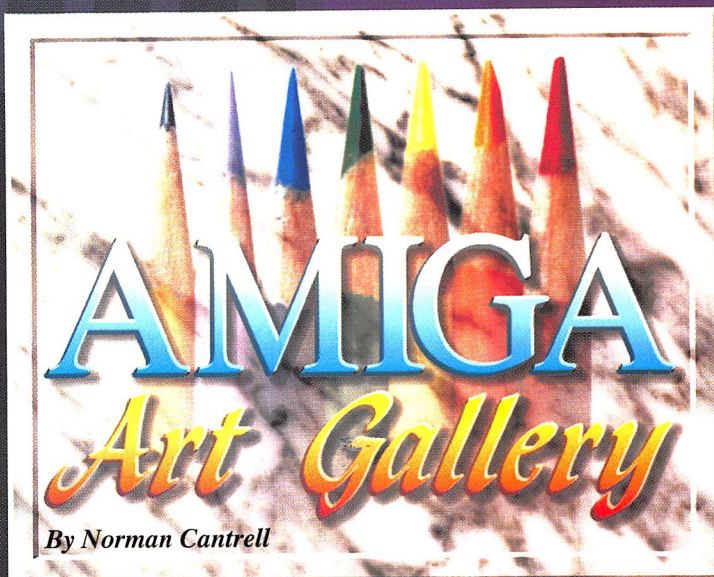
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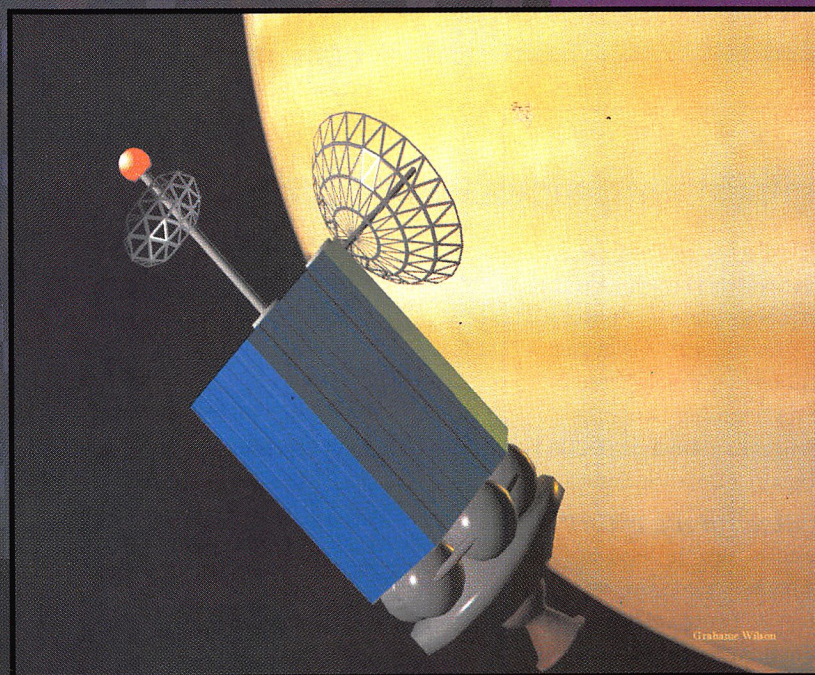
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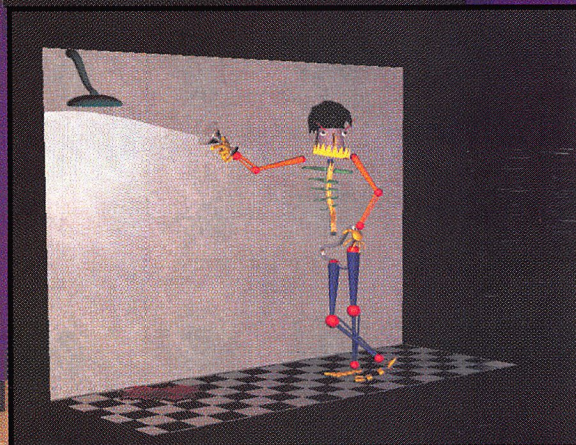


Welcome to the Amiga Art Gallery. This month sees more great Australian rendered and hand drawn art-work. It just goes to show the Amiga is still graphics king! So, if you have some graphic art to contribute, why not shoot us a disk - or modem the file to our simple BBS on (02) 816 4714.

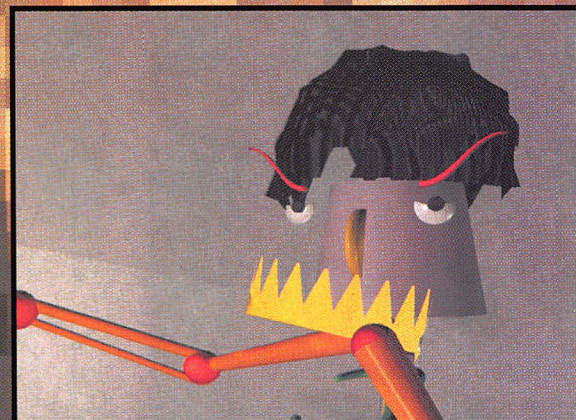
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1280 x 1024, 24bit, Created with OpalPaint and Imagine V3.
By Grahame Wilson.



869 x 612, 24bit, Created with Imagine V2.
By Chris Zwar.



869 x 612, 24bit, Created with Imagine V2.
By Chris Zwar.



1280 x 1024, 24bit, Created with OpalPaint and Imagine V3.
By Grahame Wilson.



640 x 512, 24bit, Created with Vista Pro V3.
By Perry Wong.



540 x 512, 24bit, Created with Vista Pro V3.
By Perry Wong.



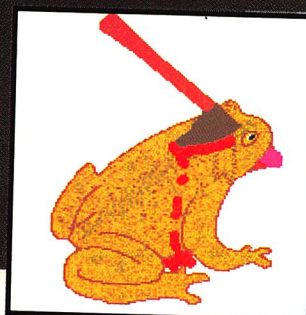
800 x 600, 24bit, Created with Vista Pro V3 & Imagine V2.
By Perry Wong.



736 x 566, 24bit, Created with OpalPaint, Vista Pro, Aladin4d & Imagine 2.9
By Richard O'brien



352 x 290, 32colour, Hand drawn in DPaint
By Andrew Francois Corby.



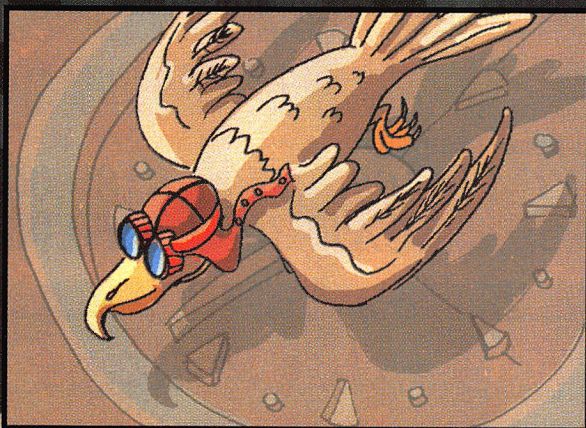
152 x 168, 32colour, Hand drawn in Fusion Paint. By Phil Collins. Part of a birthday card for his brother in QLD. :-)



320 x 512, 32colour, Hand drawn in DPaint
By Andrew Francois Corby.



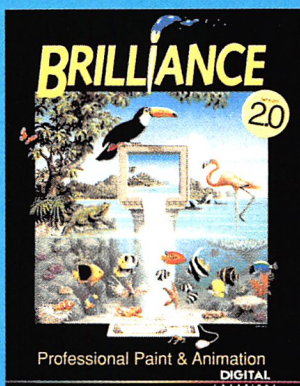
640 x 480, 32colour, Hand drawn in DPaint
By Andrew Francois Corby.



736 x 576, 24bit, Created with Imagine 2.
By David Sloah.

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This extremely popular paint package is now available at a fantastic price. Why pay more for an inferior package when you can own Brilliance 2 for only \$109.00? This is the full and complete version and is now without copy protection. Stocks at this price are limited so order now!

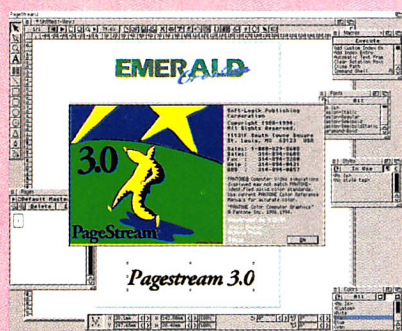


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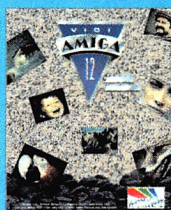
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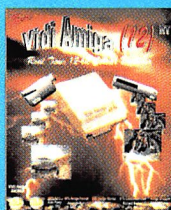
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Vidi Amiga 12 is the ultimate low cost colour digitiser for the Amiga. There are no filters and no separate RGB splitter. Colour images can be captured in less than a second.



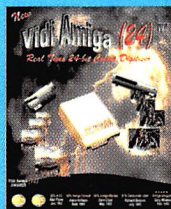
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Vidi Amiga (12) RT is a perfect multimedia video tool for A1200 users. Offering real-time colour image capture in all Amiga modes including 256 colours, Ham-8 and 24 bit.



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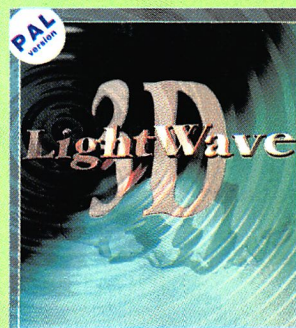
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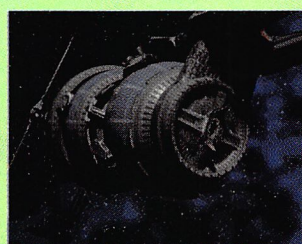
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Lightwave 3D 3.5 is undoubtedly the best 3D package for the Amiga Computer. Previously available only packaged with NewTek's Emmy award winning Video



Toaster, this is the same package used to create the special effects in the hit TV shows, SeaQuest DSV and Babylon 5. With more features than you can poke a stick at this is a must have for any serious 3D animator. See the



September '94 issue of A.C.A.R. for a full product review. Includes video in PAL format.

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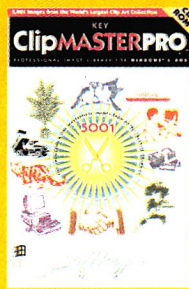
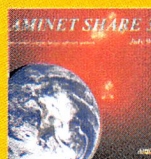
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Due to customer demand Emerald Creative now stocks an extensive range of CD-ROM and CD³² titles including; *Banshee*, *Gunship 2000*, *Cover Girl Strip Poker* and *Ultimate Body Blows*. Please call for latest pricing. Also available are *AmiNet Vols. 2 & 3*, *GoldFish*, *FreshFish*, *FrozenFish*, *Meeting Pearls*, *Key Clip Master Pro*, *Publishers Dream* and more!



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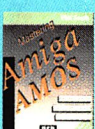

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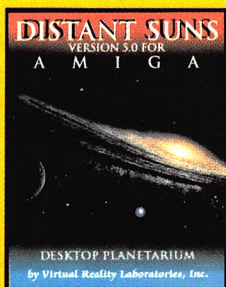
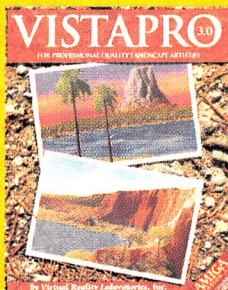
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Subscriber Infomation

Australian Amiga Review changed publishers as of the July '94 edition, but our editorial team has remained much the same. The magazine is now 100% produced using the Amiga, and it is 16 pages bigger.

We've been working on ensuring subscribers receive their copies of the magazine before it goes on sale at newsagents. Unfortunately, we've faced two problems in acheiving this. Firstly, Amiga Review didn't change hands until late June, so the July edition was not printed until late July. We've been steadily catching up ever since and have made up about one week so far. So, although your subscriber copy may arrive around the middle of the month - it is on time in terms of the publishing date. We've also had some problems with our shipping arrangements. These have now changed and we hope the problem has been fixed. For more information call (02) 879 7455.

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Contributors WANTED

Now that Amiga Review is bigger, we're looking for writers. Even if you've written for other Amiga magazines, we promise to give you a chance!

Plain English explanations, in an entertaining style, offering intelligent information on getting more out of the Amiga are preferred. Any wordprocessor format is acceptable, although straight ASCII is preferred. IFF images should include captions in a separate text file (or on the end of the main text file).

You can forward your contributions on disk or modem them to us by calling (02) 879 7455 first and then, once okayed, ringing back on our modem line on (02) 816 4714. Alternately, send them to The Editor, Amiga Review, PO Box 288, Gladesville 2111.

We do pay for contributions, starting from \$50 per 1,000 words up to \$150 for really good stuff. Please don't send your original disk, as we cannot guarantee safe return.

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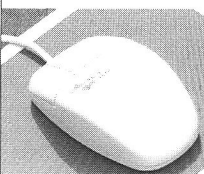
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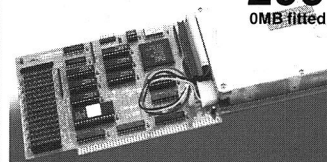
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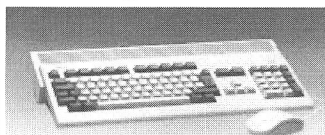
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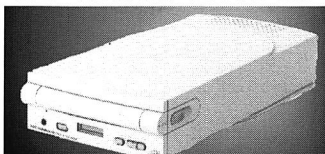
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